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BNSF[1,2]

Low Headlights

CSX[1]

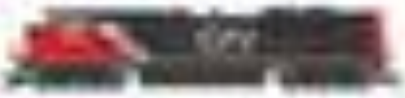
High Headlights

Kansas City Southern

Low Headlights

Canadian National

Low Headlights



Norfolk Southern

High Headlights

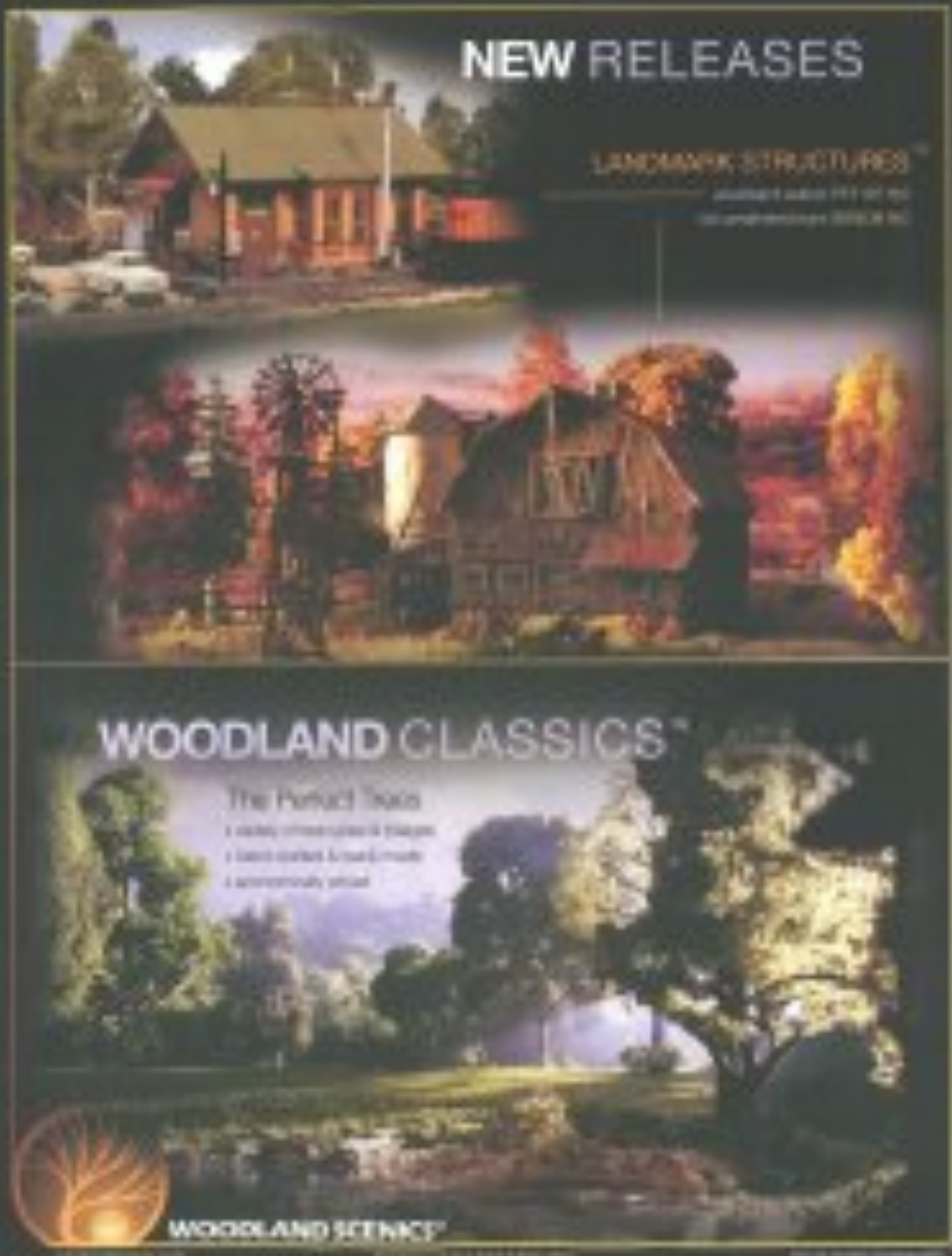
Union Pacific

Low Headlights

Undecorated

Low Headlights

WALTHERS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RAILMODEL JOURNAL

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December 1970 Volume 3, Number 7

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GR's columnists

This magazine is a collaborative effort by a couple of hill dozen (More Information and Less, our authors, and our regular contributors, whose names appear above their by-monthly columns) or else I can't do it. Without everyone has been on the job for a long or four of conventions copy or start taking them for granted and to forget that their lives remain the magazine. So as an attempt to avoid that, I want to dedicate this editorial to GR's columnists, with my thanks and appreciation.

Ole Olsen Pedersen retired from a 32-year practice of (internal) medicine and nephrology in 1999, keeping new gardening, painting, travel, hiking, and finishing his garden railroad. Ole became a Master Gardener through the Ohio State University extension and has designed and built many garden and outdoor model garden railways. Ole also writes short stories, does watercolor painting, and plays the harmonica in an impromptu ensemble band. He's been married to the love of his life for 44 years and has three children and five grandkids.

Jeff Young is a mechanical engineer and has spent his entire career in the rail transportation field, previously working for governments. He currently works as a consultant for rail transit systems throughout North America. Jeff is married to Diane Brightwell (myself we will live more adventurous and spoken ambassador). His other interests include bicycling, in pain, hiking, Frank Lloyd Wright's architecture, traveling (mostly England and Wales, usually, and railroad archeology).

Nancy Nania. For the past thirty years, has been landscaping her yard in such a way that she approached a 1,700 piece garden railway. She created and edged their lilies and shrubs, progress has blossomed into outdoor living spaces, a pub, and an ever-extensive property, such as a vegetable garden overhead, a family dining area a shade space, and her favorite, a shed extension, inspired by Jim Young's books. When no photo shoots, Nancy is babbling "on spots," to which she can relax, care the birds, and figure out what they are saying.

Vance Ross spent almost thirteen as a software engineer and a five-year MA company, he "retired early" to become a stay-at-home dad, regular bird geezer, and writer a scenic blog. Vance really recommends recommending "Word Home and Margaret Durant. His other spends a good bit of time with children, including his two-year-old granddaughter as well as coaching soccer to kids at his church's after-school tutoring program. He says, "My dad car had a peak fashion sense, I never forgave that I would carry a book case. It's the I've completed worried to me pockets that I like it."

Kevin Young Kevin, Alice K is around his indoor plumbing, by now over 100 years old. Kevin is fascinated by late 19th century/early 20th century history and industrial development. When he's not working at his job as a video editor and writer for KSR in Denver, he can often be found exploring historical areas in Colorado, checking out "old stuff," and generally over-planning the Society Colorado has to offer with his wife and two young children. Kevin also plays the piano and takes lots of pictures.

So, there's a quick peek into the varied and interesting lives of people who have so graciously given of themselves into the betterment of this magazine and of the hobby of garden railroading. We owe them a debt of gratitude.

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Athearn has advanced the art of producing high-quality Ready To Run® (RTR) locomotives in a very short time. These beauties can compete with any other RTR in their class in terms of quality and detail.

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Buy an Ex-popular locomotives and their brilliant paint schemes at your local train shop, or browse the collection online at **www.Athearn.com**.

NEWS & PRODUCTS

Norfolk Southern heritage units are now available from Athearn. The models are decorated for Wabash, Erie, Reading Co., and seven other RR

Industry news

• Personnel changes at Atlas. Tom Woodruff, CEO at Atlas Model Railroad Co., stepped down from the position after 30 years with the company. He will continue as chairman of the company's board of directors.

Brad Lloyd, Atlas' chief operating officer, will take over as CEO. Woodruff's son, Jarrett, will be the brand's chief operating officer. Former marketing coordinator Eric Modlin was promoted to vice president of marketing.

• Oregon Rail Supply celebrates 25 years. February 2016 marks the 25th anniversary of Oregon Rail Supply. The company, based in Sycamore, Ohio, is well known for its HO 4-4-0 engine's Sid-winder tender, which has been produced in many road names.

Oregon Rail Supply also offers an HO scale depot kit and rolling stock kit in 1:87 scale. For more information, visit www.oregonrail.com.

• QM Solutions spins off. Tony Payne, owner of Tennessee Hobby Distributors, announced that its QM Solutions subdivision is now an independent company under the ownership of long-time manager and product development lead Joshua Smallen. QM Solutions is an exclusive distributor, manufacturer and product development associate of QM Solutions of Rossmoor, Calif.

Spring Creek Models Trains is offering three custom-decorated hoppers decorated for Wabash, Erie, Reading Co., and seven other RR

HO scale locomotives

• Sierra Western Division F7A and B units. Alkali RR Division of Alkali-Lonsdale Terminal is one of seven Chicago & North Western Kansas City Southern / Lehigh Valley co-ed RR Consortium. Alkali has 600 Alco Yard Control A and B locomotives. Purchased in 1966 and 1969, Alkali's 600s have road numbers. The numbers each reflect when the locomotive was purchased. Operating headlight, cab interior with firefighter, and Kadee knuckle couplers. A total decoration scheme. DCC/DC with dual-mode 8-pin Gabriel/Loksound decoder. DCC/DC 4-8 axle direct current. DCC/DC with dual-mode 8-pin Gabriel/Loksound decoder. Alkali RR Division of Alkali-Lonsdale Terminal, Los Alamos, 575-668-2375, www.alkalirr.com

Mobile Updates

Scan this code to access Model Railroader's website for weekly News & Products updates.

• Rhinebrook Locomotive Works 4-6-6 and 1-6-6 diesel locomotive sheep. Canadian National (white or red) wheel arrangement, Angle Valley Wire. Sizes: 4-6-6, 4 units w/ sets (weathered, New Tank #1, Lake Erie); 1-6-6 w/ sets (weathered, and 1-1-1 Rail #1 N Shed). 1:76 Hon. and standard N-Scale. Also available undecorated. Multiple numbers per (Pacific states) noted. Select models offered painted but unnumbered. Fine scale-done-around number subdivided details, and Rhinebrook Carbon & Metal couplers. DPs in doors current with 2-pin plug. 4-6-6 with dual-mode DCC (advanced decoders, 4-6-6, 1-6-6 & doors comes with 2-pin plug, ADM) with dual-mode DCC (advanced decoders, $180. Late 2014. Ready to run. (803) 8 and Rapids Trains, 401-272-4447, www.rapidstrains.com.

HO scale light rail

• Kawasaki single-unit light rail vehicle. Southeastern Pennsylvania Transportation Authority (SEPTA) paint schemes. Two road numbers (#99 or each number produced). Engineered operation packed in blue cardboard with closed window glazing and simulated-wire packaging. Powering option is available (sold separately) for details; $99, available since 1977 a Tyco® (all digit and locomotive. Imported Golden Trains, dgtrains@gmail.com.

HO scale freight cars

• 40-foot wall steel car. Nine road numbers: Kansas City Southern, Nine-panel sidewall. Models & Western Pa 1:76 plastic. Authentic steel road numbers. Chesterwoods Bay (CB, Norfolk Southern, and (1) Wall Cars numbers. Four numbers each sides noted. Automatic hood, no through running boards, and coupling levers. $34.95. Road packs: Wall, Steam Line Atlas Model Railroad Co., 800-347-3666, www.atlascn.com.

• Wichitonia, Topeka & Santa Fe 89-foot General Humanitics wing car. Car-body (or with) details but no grab irons, ladders, or related details, $39.95. Concept Models, www.con-cor.com.

• Pacific Car & Foundry lever car. Tech paint schemes: Northern, Topeka & Santa Fe (as delivered in Cortez, engraves #1234 Rr, cylinder cover beneath Burlington Northern (BN) as BN-1 repainting number. Golden Train Service, and Western Pacific (two road numbers). Six numbers per scheme unless noted. Transcon Rail Foundries. $99 two Body-Colored cranks, 36" tooled wheelsets, and brakes on 18 beautiful couplers. $34.95. Precision Scale. Ready to run. Chesterfield Co., 866-947-7700, www.wagonmfg.com.

• Bethlehem gondola. Nine prime schemes: Baltimore & Ohio (1950 repaint with large stenciling, (1) car numbers, Lehigh Valley (original 1950 model with and Western Maryland (original 1951 with no car number unless noted. Nine road numbers (Bethlehem) 1947 schemes). (1 relief) 44-of Pennsylvania (original, three schemes, (1 wood of Nine letters (with 1952 enough data). Lehigh Valley (1951) (small) Rail support, and Western Maryland (1951 not schemes, five cars numbers each, also available undecorated, ready to run or kit. Separately applied details, some resin/brass.

At model railroad expos, **New available from Micro Trains are a Toledo & Peoria Wisconsin Central Grain bay-covered hopper, $27.95; Chessie System (with Baltimore & Ohio reporting marks) 100-ton three-bay hopper (with coal load), $24.95; Montana Rail Link 50-foot gondola with cable container load, $20.95; Northern Pacific 40-foot general service drop-bottom gondola with gravel load, $24.75; and St. Louis-San Francisco Frisco 50-foot two-bay offset-side hopper with coal load, $22.95.** Micro Trains Line Co., 541-928-7742, www.micro-trains.com

In Memoriam

John Frank, 1949-2016

Long-time Model Railroader author and staff expert John Frank died Dec. 27, 2016, in Champaign, Illinois.

John was introduced to readers in 1980 when, playing off his prize-winning New Haven RR-2-8-4 locomotive and a published letter-article, Kalmbach Publishing Co. hired him as Model Railroader's electrical expert.

Jim Hediger, 1924-2016

Jim Hediger, an early member of the Model Railroad Railroading Society and an NMRA Master Painter, died on April 4, 2016, at his home in Kansas City, Missouri. He suffered from complications from heart disease.

Jim was a longtime Model Railroader reader who wrote articles for the magazine from time to time and was also a contributor to the development of the Model Railroad Planning annual.

With scale drawings, photos, historical details & valued expertise, **Allsworth Publishing** is offering this **six-axle locomotive decorated for Burlington Northern (BN™ scheme) and Soo Line, Minneapolis & Canada (SL™ scheme).** The models, **SD60 and SD60M**, are part of the Roster Series that features railroad-specific details and McHenry scale knuckle couplers. Allsworth Trains, (310) 822-7742, allsworth.com

and knuckle couplers. HO/1:87. Assembled. Tangent Scale Models, 224-219-4500, www.tangentscalemodels.com.

• Evans 50' 4-set 4,740-cubic-foot-capacity 2-bay covered hoppers. Sets paint schemes: Archer Daniels Midland (yellow); Burlington Northern (weathered oxblood); Missouri Pacific (blue-gray); Union Tank Car (white with 3 colored bands); and Farmers Cooperative Association, York, Neb. (blue). Etched metal running boards, factory-installed grab irons, and Protec-Klad knuckle couplers. $39.98. Ready to run. Intermountain Mfg. & Railfilters Inc., 814-727-4176, www.railfilters.com.

Club offerings

• High-sides for Seaboard Air Line gondolas. 1:24 and 1:29/1 scale parts produced by Wright Trak Models for the Atlantic Coast Line and Seaboard Air Line Historical Society. Designed for Accurail 3749 series. At that Association of Historical Railroads gondola. Includes brass, carbon wire/accessories, instructions, cut data and prototype photos. $29 plus $5 shipping. For undecorated Accurail car with value available for $15 plus $5 shipping. Atlantic Coast Line and Seaboard Air Line Historical Society, www.acls.org.

• Warehouse Despatch Transportation Co. 40-foot refrigerator cars. Accurail HO scale kits custom-decorated for Division 7 of the National Model Railroad Association's Mid-Central Region. Kits can be built or available preassembled and decorated. Single car $28, four-car set $70. Shipping $4 for one car, $9 for two to four cars. Ohio residents add 6.75 percent tax to total price and shipping. Total check or money order to Division 7, 28 N. Ninth St., P.O. Box 6256, Cincinnati, OH 45206.

• St. Julien Winery 40-foot X-31 boxcar. Custom-decorated Accurail 40' HO scale car w/ six-ladders, X-X, X-31 assembled under Kadee trucks, couplers and metal wheelsets. $34. Add $7.50 shipping per order. Check or money order to Kalamazoo Model Railroad Historical Society, P.O. Box 346, Kalamazoo, MI 49004, www.kmrhs.org.

• Pittsburgh & Lake Erie RR 50-ton triple hoppers. Accurail HO scale kits custom-decorated for the Pittsburgh & Lake Erie Railroad Historical Society. Four road numbers. Single car $27.98, set of seven cars $59.99. Shipping $8. Pennsylvania residents add 6 percent tax. Allegheny County, PA residents add 7 percent tax. Mail order to: P&LE Product Line, 9 Cramptons Court, Honeydew, NC 27857, www.plerrhs.org.

HO scale details and accessories

• 9-block concrete barriers. Four resin and two cast-metal castings. Four pack, $6.95; eight pack, $11.95. 16 pack, $21.95. Great Lakes Models, www.greatlakesmodels.com.

• Pullman heavyweight baggage car doors. 4 3/4" x 9' doors. Single or door and frame resin-cast. Etchings on brass and frame resin-cast. Etchings on brass and frame resin-cast. Etchings on brass

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N scale locomotives

• Electro-Motive Division GP15-1 diesel locomotive. N/A; plans advance replacement Northern Pacific diesel locomotive #4009 by Washington Historical Society. Features pantograph, RPO, Control Track & Electric, Norfolk headlamp, and Rule-Based & Flexible. Five road numbers each in yellow and gray. Fine-grab decal applied under cab door for wheels and directional lighting. $69.95. Hand-painted shell. Expected arrival, late-Model Railroad Co., 818-447-4836. www.atlasrr.com

N scale freight cars

• Brennan Auto Train auto racks. Available (shown) in 3- or 4-car kits. Plastic car positions per packs scheme. Three car positions and hinged, blade knuckle couplers. $24.95. Ready to mix. Cars Corporation, 330-725-8888. www.cars-corp.com

• Hoop-rib wood-chip hoppers. Have Northern Big Sky Mail. Six road numbers. Injection-molded plastic body with rear-mount hoppy wheel and plastic wheelsets. Height on: $29.95, two-pack, $49.95; three-pack, $74.95. Ready to run. Del pre Corporation, 314-997-9888. www.delpreconnection.com

O scale freight cars

• Pullman-Standard 50-foot PS-1 boxcar. Five-panel scheme. Six-door. Together & Santa Fe (1 Serapeum & 1 Pine Lumber & Hardware, Pittsburgh & Lake Erie Railroad), Timberlichting & Pacific, Caldwell Coast Lines, and Sea-Line. Two car numbers each. Etched metal weighing board, separately applied details, and 4-wire compatible knuckle couplers. $72.95. Second quarter, 2015. Ready to run. Atlas O, 908-687-9888. www.atlas-o.com

S scale structures

• Historic Barn. Laser-finished kit with laser-cut doors and windows, sidewalks, and interior floor. Footprint is 7" x 11". $129.99 plus $11 shipping via direct orders. Downtown Deco, 888-831-3282. www.downtowndeco.com

Z scale locomotives

• United States Railroad Associa-tion light Mikado. Three-point scheme. Nonweathering. Five road numbers.

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NEWS & PRODUCTS

Buster Point series 4 streaking comes in bedroom lounge observation car. **This** nearly no run set is coming soon from Rapido Trains. The observation car will be decorated for VIA Rail Canada, Canadian Pacific, CP Rail, and with a stainless steel finish but unlettered. The car will feature an illuminated drumhead and marker lights. Unlettered cars will have name boards to replace lengths and car name decals. $195. Superior Stainless Steel series. Rapido Trains, 800-570-0017, www.rapidotrains.com.

available. Elliptical headlights, directional light covering Lionel headlights, stainless trims, and metal-skirt knuckle couplers. $219. Ready-to-run. Accurail or Lionel, see line. (734) www.accurail.com

Electronics/controls

MICRO-TRAINS ensures locomotive sound decoder. Produces some sound quality and functions as original version in smaller size. Features 9-pin ESI connector on front and 7-pin ESI harness on rear. Accepts audio or software from Loksound, ESU, or Soundtraxx. $72 to $87. Wireless Sound Module, $124.95; audio $149.95. Tsunami Lokpilot harnesses, $15. MTH, Micro-Trains Line Company, 800-388-1177, www.micro-trains.com.

Tools

• Couth Crimps. Wedge design accepts all three wiregauge combinations, even on the two without ridges at once. Fits wire 0.1 to 0.2" dia. (1 to 5 AWG) in scale 3" to 4.5", 4½ to 5" in 24" (68.58 mm) scale 5" to 6.5" dia. Illustrated 4-piece, $39.95. Couth Crimps, 770-474-1000, www.couthcrimps.com.

• Precision scissors. Soft rubber grip and built-in return spring. Ideal for all gaming and carving and detail up to .040" thick. $23.95. Xuron Corp., 207-282-1500, www.xuron.com.

Catalogs

• 2010 catalog of scale plans. Includes marine power, milling work, and attachment for steam line, oversize gauge, steam line, and machine methods. $3. Underground Railroad Press, 913 Bay Hollow, Rockwall, TX, 75032-6604.

• Switch Buddy Mate. Rail and block wire nut fixes thumb tip knobs. Digitrax Zips or twist wires, zip-tie hole, and accessory port for SB-3 and other products offered by time. $12.95.

Books

• Oregon & Northeastern Railroad. By Jeff Wilson and Mike T. Morgan. Covers the history of the Oregon & Northeastern RR and associated railroads, including the Midland RR, Ashland Mine's private logging railroad, Crane Prairie & Oregon Eastern historic, and the Oregon Eastern Division of the Wyoming, Colorado RR. More than 240 photos from museums, private collections and archives. 128 pages, softcover, $21.99. Arcadia Publishing, 888-313-2665, www.arcadiapublishing.com.

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Railroads often used wooden pile trestles to accommodate curved approaches to steel spans in the early 20th century. This former Northern Pacific bridge stands in Snohomish, Wash. JIM FITZGERALD

Combining wood trestles with a steel truss bridge

Will it look out of place if I combine wooden trestles with a steel-truss bridge to span a river and parallel highway on my HO layout?
Roger Marks, Durham, Ont.

It isn't unusual for railroads to combine various types of bridges to span problem areas. The key will be to make sure the wood bridge is properly supported to zero at both ends. You also want to make sure the track passes smoothly across the bridge joints.

The spans could be a double row of pilings capped with timbers, or there could be rows of wooden bents (vertical supports) with diagonal braces. Be sure to check prototype photos to see how the bridge is supported.

Using models as either cast offs or just to save the expenditure, but be careful to allow enough room for the locomotive and rolling stock to straighten out before they reach the truss bridge in the middle. The prototype bridge in the photo also has a short deck truss section at terminus that curves nicely with the HO-size commercial truss bridge.

This combination of bridges is on a 1.5% percent grade that's part of a former Northern Pacific secondary main line. The track in this area has 110 pound rail. — Rob Boddye, senior editor

How you explain how railroads combine their equipment rosters when a merger takes place?
Felix Quinn, Bayberry, York

By definition mergers combine the assets, infrastructure, and equipment of two or more railroads. Naturally, the size of the companies involved plays a big role in what happens following a merger.

Combining the locomotive rosters is especially important to shareholders and dedicated engine members that can cause confusion in train orders, operating practices or record keeping.

When the Soo Line acquired the Minneapolis, Northfield & Southern in 1992, some of the MNS units continued work there even as many as twenty to thirty years old. Of course the Soo gave certain units priority, but eventually all were repainted into Soo Line livery.

As a subsidiary of the Canadian Pacific, the former Soo Line locomotives are numbered as part of a CP locomotive class. When CPRS acquired the Delaware, Lackawanna & Western in 1960, all of its locomotives had 5-digit numbers. Remembering was a matter of adding a 6 prefix to the DL&W numbers so the diesel units ran the roaring 6,700,000s.

The Norfolk & Western had merged with the Nickel Plate and Wabash, Pittsburgh & West Virginia and Akron, Canton & Youngstown RRs with a great deal of planning to eliminate duplicate numbers. Considerable renumbering was done beforehand on the Wabash units so whenever 4-digit numbers were to be applied (N&W was already using three-digit numbers).

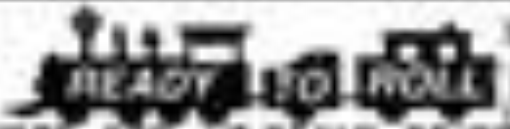
A second renumbering took place shortly after the merger to add a prefix number 1 to former N&W units (so 313 became 1313) and a 7 to the Wabash units (so 412 became 7412). The N&W's and W&A's were also renumbered into gaps in the combined roster.

Responsibility for the Belfast and Northern subsidiaries of the former Chicago, Burlington & Quincy, Great Northern, Northern Pacific, and Spokane, Portland & Seattle was considerably more tricky. In these cases, smaller road units are grouped by themselves and numbered accordingly. There is also running a 3000-plus number would be a 3,000-h.p. locomotive.

This renumbering was never accomplished by painting over the original engine number and applying the new company's initials and number on the panels. Full repaints invariably waited until the unit was stripped for heavy repairs, or repainting a large fleet which took up to a decade to complete.

To prevent confusion during the renumbering, the merged companies usually included a reporting mark with the engine number. Below, a mini order would be addressed to "Every CB&Q CN Motor" so laborers the unit's paint scheme until the CBRM was removed and the BN scheme on. Other the paint numbers were applied, a "Number BN 9999" until the railroad was officially the BN's numbers were applied. — *J.R.M.*

Send your questions about railroad operating or preservation topics to: Model Railroader magazine, P.O. Box 1612, Waukesha, WI 53187, or e-mail us at mrmag.com. We regret we can't answer all the questions we receive.



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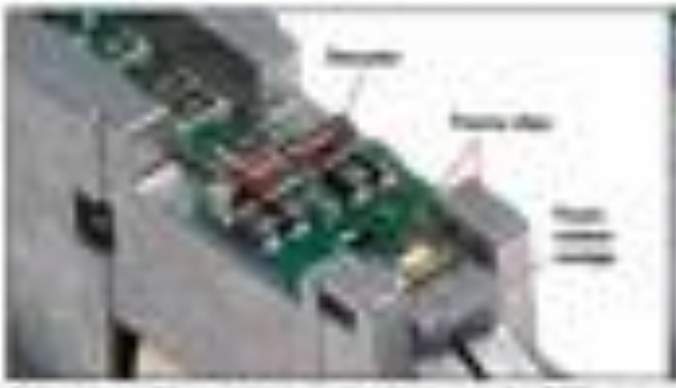
John Rattle

N scale decoder woes



A tiny piece of foam rubber wedged between the DCC decoder and the frame ensures good electrical contact. Jim searched long and hard to find this tip on the Internet, and knowing it had been in July's issue of MR.

also screwed this corner of the DCC decoder to the locomotive frame. He broke off the card on tab trying to bend it to hold the decoder tightly enough to make adequate electrical contact with the decoder.

There seemed to be plenty to write about a round of recent frustrations dealing with N scale (Digital Command Control (DCC) decoder installations. The culprit of the woes will be the Internet, but in an unexpected twist of plot that some million dwarf oranges at the time. We need to start this from both a good side and a bad side, which will probably come as a surprise to no one.

The Internet is a good source of information. Unfortunately it's also a source of misinformation, or what other words mean, incomplete information.

There's a case to point from someone. After introducing an all-new N scale model of an #4 time freezer, it looked great and was appreciated by the general modeler. We've visited it with a metal body, metal wheels, and most recommend couplers, as I thought I was.

I took them home and discovered they are pretty. The wheel flanges rubbed against the footwell of the body. "What gives here?" I asked myself, and went on the Internet to find out.

In one of the discussion groups I felt like there was a thread about the car that went on its profitably. All owners singing the unit's praises. I was beginning to think I was sure until someone said, or seemed, "It's good—there's a pretty big problem here."

I found the problem for running the body with NMRA "New modern's Model Railroad." There are solid to HO products, then evolved perfectly fine. It body was modern, per track, assuming I couldn't have read Reader's NMRA" numbers.

And now for an example of bassman frustrations, one finds which the manufacturer only recently fixated.

Recently I needed to install some decoders in the SD40-2s, there I've been running for years and now sure does. Why the three older engines worked and decoders? It baffled and me.

I took the three hard decoders to Daphne for repair and bought two sure ones at a hobby shop. Following the directions carefully, I installed the first, tried to run the engine, and got nothing.

I tried a second decoder in a second engine and got the same result. So the model can time no direct current, and when I tested the decoder itself, it checked out fine too.

Finally I identified the problem. The electrical contact on the decoder wasn't making firm contact with the wire in the frame because the decoder wasn't thick enough. This was compounded by the fact that the decoder had only two such contacts. (The stock 4-axis lightweight one has 4 wiring pads.) I thought, I'll just go online and search for a solution.

I found one a half dozen or so high-quality decoder installation videos. Unfortunately the procedure did exactly what I was doing, except that in his case, he had these two protective tab foundations that I mentioned. I learned to bend that I need the altogether inadequate to even attempt this fidelity. Why's it not happening to me?

Then I tried some manufacturer websites. It's in parts else has a few are wide bet of good web one is to make a card. It also makes a decoder to fit my stock now, which nudging for the plastic shell but not the two contacts.

They offer two suggestions to solve my problem. One is to apply a droplet of solder to each contact to make it thicker. The other is to bend the tabs on the frame down to make the old functional. I tried both these solutions and they both worked, but were not a deal or no. In the end I took one on the rails two would just be just a bit I solved the problem by drilling a hole through the decoder's contact and into the frame, then tapping it for a 56-40 brass screw.

Several days later I got up at 3 a.m. and started plowing through more web sites looking for some kind of other tool kit. Finally I found it at N Scale Supply's site. The suggestion is to cut a small chunk of the hard black rubber packing from the box the engine comes in and wedge it between the brass and the decoder, pushing the contacts up against the brass tabs. Problem solved.

Eventually I might have found a solution without the Internet—maybe even in the store magazine. In the July 2014 DCC Corner column, Mark Gurbacki studies this. Where engineer been to use plastic wedges on shims of which to improve contact between an N scale decoder and locomotive frame.

But my search had the benefit of giving me lots of other useful tidbits. N Scale Supply's site showed a method for running track on a nonmodeler's lightboard and hardening one of today's small N scale decoders to 4. I'd really like to give this one a shot.

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The language of lumber and power cutting tools

Power saws will help you build a layout quickly and neatly. A saber saw (left) is handy for cutting curved inside boards, scenery formers, and fascias from sheet materials. A circular saw (middle) cuts dimensional wood, plywood, and other materials. And the power miter saw makes accurate, square cuts, and can be set up for repetitive cuts. Jim Stieber photo.

Wood is the most popular home construction material. It's readily available, strong, easy to cut and work with hand or power tools, accepts many different adhesives and fasteners, and has a workmate look. It helps to understand and also smart to use the right lumber for the job.

Dimensional lumber is the name for the long pieces that are between one and five inches thick and at least two inches wide, usually in nominal sizes (1 x 2, 1 x 4, 2 x 2, 2 x 4, and so on). The **grade** of the lumber indicates its quality and strength. The best grades are kiln-dried to reduce warping or twisting.

Framing lumber is used for structural parts in building construction. It's cheaper than dimensional lumber and has a greater tendency to warp as it dries. Pressure-treating is a chemical process that prevents insect infestation, the rot resistance of heartwood, and rotting when the finished framing lumber is used in direct contact with concrete.

Millwork consists of clear, top grade lumber that's been shaped with high-speed rotary cutters into moldings used to dress and trim doors, windows, and other trim. Many moldings are stock-finished shapes in wide and good looking trim around house edges and control panels.

Sheet materials come in handy to insulate the walls, the exposure of roof panels occupied for protection, cabinet panels, engine enclosures, and fences. Sheet materials are sold in 4 x 8 foot panels and a variety of thicknesses. However, only a few of them, sheet panels are suitable for loaded cabinets.

Plywood has a smooth, solid, and rigid surface consisting of thin wood veneers laminated to a central core with the alternating layers at right angles to each other. The top and bottom layers are usually cost toughness as the x x x plane. The type of adhesive used for laminating determines if it's an interior or exterior waterproof plywood.

Plywood has two major grades.

Grade A is smooth, has no knots, and is the strongest.

Grade B is also strong, but has some knots and very slight unsmooth areas.

Grade C has more blemishes than grades A and B and is not as strong.

Grade C plugged is similar to Grade C, but knot holes and voids are filled in with knotholt shaped plugs.

Grade D has large knots and holes and isn't recommended for better use.

Exterior plywood is the most common since it resists moisture. Final grades like A-C or B-C indicate the best side is Grade A or B and the back is a C.

For remodeling projects, ¼" grade B-C exterior plywood is sufficient, and ½" resin moisture where water impact conditions are applied. Where its good side is used as the top surface, nothing will be when the underside is like.

Medium-density fiberboard (MDF) has smooth, dense, uniform surfaces on two sides. It's made of short wood fibers bonded with resin adhesive into a solid sheet. It can be fastened with glued joints or wood screws countersunk with pilot holes. While ordinary resin won't hold properly, you must machine screws and T-nut fasteners with wood well.

Tempered hardboard is the generic name for a smooth, thin, and flexible sheet material that was first marketed in 1924 by the Masonite Corp. Similar wet-pulp hardboards are also made by many companies, but the Masonite name is best known. The finished panel has a smooth, burnished finish on one or both sides, or many panels have a smooth finish on one side and a screen-backed finish on the other. Masonite has a smooth finish on one finished surface and a screen-backed finish on the other.

Oriented strand board (OSB) is a composite sheet material made from thin, shredded wood strips oriented at right angles between layers. It's low-cost, sheet plywood, and is commonly used for rough sheathing and subfloors.

Many other composite "boards" are available, but their applications in a basic tutorial is limited. Most of them are made of coarse wood chips from logs that aren't suitable for plywood or lumber production. All of the wood composites are bonded with resin adhesives so their surface qualities vary, and some of them have hazardous dust.

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WORKSHOP TIPS

Ordinary hand saws will cut through most of these materials. The key to a good cut is using the proper blade for the job. Hand saws work well on thin materials, but the thicker the wood, the harder it is to get a smooth, square cut.

Rubber bands do a good job of holding curved or straight cuts (with a guide) to any material less than an inch thick. The proper blade makes a big difference, as will your stroke. Ask for help if you're not sure. Power tools make a smoother cut, but they'll take longer to finish the job. Let the saber saw do the work and don't force it. Remember, remember to replace blades per HSIT, or use coarser if you need to change a blade.

A scroller saw works with all types of wood. Once again, the proper blade makes a big difference, so don't be afraid to ask for a recommendation. The price has also gone down a bunch — cheap blades give the saw a bad name. Make sure to practice and work on a scrap piece so the workpiece doesn't suddenly shift.

A power miter saw makes smooth, accurate crosscuts. It's perfect for general home construction since most of these saws are really portable, with blade sizes ranging from 10" to 12" inches in diameter. Wear safety goggles and always make sure the saw is clamped down or in a solid base to prevent unexpected movements.

The power miter saw makes cuts by pulling a spinning circular saw blade down onto a workpiece held against a fence, which provides a precise cutting angle to ensure the blade and the straight edge on the workpiece (or material) are true. One angle is 0 inch at 90 degrees, the blade will alternate to other common angles (work at 22.5°, 30°, 45°, or 71 degrees).

As with any power tool, always read and follow the manufacturer's instructions. And if children are around, don't forget that battery-powered saws release "fun" whenever the battery pack is in place. — Tom Hodgen, senior editor

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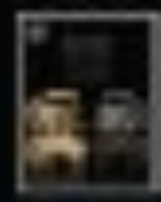

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Garden design — the magic is in the details

Have you ever enjoyed how some garden landscapes evolve so wonderfully and organically, while others, a little time and homeowners are can't pay, soon begin to [illegible] look "terrible"? It's the same with [illegible] landscapes. There's something about how the plantings and design elements complement the landscape as a whole—things aren't just plunked down in the right—they have a purpose—and you see the feeling where there was and how the [illegible] was their surroundings. There is known as "harmony" in the design world, and is the result of careful planning and good selection of plants.

In this column I'd like to talk a little about the process of landscape design, how the concepts used to [illegible] work, creating spots in gardens exhilarating, then use plants to maximum their specific [illegible] shapes around that [illegible] the look of these concepts.

Getting started

Years ago, when I worked as a subcontractor landscape designer, I'd [illegible] the homeowners and find out exactly what they were hoping to get from the design. I'd be preparing for them immediately [illegible] single, several folks getting married, and wanted a place, or "stage" [illegible] their [illegible] just to a beautiful and useful living space. It's easy to [illegible] out with some software plugin, and I'll be happier to "do" flying "see-it" into digital on computers a plan as possible right from the beginning, as well. "Real" with [illegible] these [illegible] and maintenance and like all the different components you might want on [illegible] a front yard scene during a fourth of July celebration in the village of San Mateo area the 1950s or mid-[illegible] Photo: Courtesy Redwood in San Mateo, California. Everything in this scene creates a [illegible] sense of historical perspective, from the architecture of the house to the clothing of the characters. The carefully planted trees, with their thick wood, shabby bushes, also [illegible] a sense of age and history. In this time period, little space was wasted and it was common to plant fruit trees in the front yard, symbolizing we wealth within [illegible] today. Contemporary [illegible] "upset" trees between their fruit is usually in [illegible] with the rest of the [illegible] yard—it's [illegible]. Three, now 3-4 [illegible] and three that can be [illegible] to create a cohesive design. Existing [illegible] can achieve this harmony as well, but it requires a more critical look to [illegible] the [illegible] and overflowing elements.

Not only was these creatures once a perfect choice for the six pairs a mix could ever become a one of kit and kid about. Because Louis Anthrust's dream house, California, but the complementary colors of the wagon, tricycle, scooter(s), and police have only create a harmonious feeling.

Finding harmony

In residential landscapes, the first thing I did was locate the design and different areas based on functions (and I'd always incorporate specific elements in the first place), and together (designated as "rooms"), much as traditional (especially in separate planes or colors ("separations"). It is the same thing with [illegible] plan areas, or scenery, need to be independent in [illegible], yet joined together as a whole. Some guided [illegible] scheme this by using [illegible] to harmoniously [illegible] elements. [illegible], [illegible] [illegible], [illegible] [illegible] or the [illegible] [illegible] with [illegible] or plant [illegible] [illegible]. The [illegible] [illegible] that [illegible] together [illegible] [illegible]. And I've found this one of the [illegible] ways to create "[illegible]" is to [illegible] the [illegible] of [illegible] [illegible] to a [illegible], and [illegible] [illegible] throughout the [illegible].

Setting one's shoes

[illegible] of the most [illegible] [illegible] in [illegible] [illegible] [illegible] a [illegible] [illegible] [illegible], [illegible] [illegible] [illegible].

A beautifully shaped [illegible] [illegible] [illegible] a perfect [illegible] between the old-fashioned schoolhouse and the playground's [illegible] [illegible]. Two miniature spruce [illegible] welcome children as they enter the building. This wonderful example of [illegible] was designed by Nancy Myers of [illegible], [illegible], and Ron Philpott. [illegible], [illegible] in La Crescenta-Montrose, [illegible].

Two [illegible] [illegible] [illegible]

Regional gardening experts

Q *Jonathan Alexander: How do you use them and what are some of your favorites for your colonial?*

Lily Miller: Cape May, New Jersey
Zone 7

A leafy green plant or old in zone garden cultivar is the exotic power (Viola tricolor), a showy and prominent blossom that usually appears at garden centers in late September or early October. The colors are spectacular, with a variety of contrasting centers. They come in different sizes and shapes, with small petals or large, and their flavors through out the leaves and bits tot on. They will get leggy at least there pruned and don't place them too close or cross each. The 'viracle' or a wonderful daughter of color when bitch the is spinning.

Carol Easterday: New Columbus, Ohio
Zone 6

What on my list, Kalanchoe is physical to evergreens and perennials, but it's the annuals that grow in striking colors from early rosebud to frost. A few of our favorites explorers are 'Purple Flamel Leaf' alternanthera, which grows to about 10" tall and is used for its bright red stem and foliage. 'Lavender Waterfall' heliotrope, a trailing plant covered with small lilac blooms. Bidens ferulifolia, with foliage under 1" tall and covered with 2" tall, white-petaled daisies and red hearts. Amaranth, particularly 'Illumination' (Seed Is Kill), with 3.5" tall and unusual stole leaves that look like a cross between silk nylons. 'Golden Bedder' coleus, a dark of thinner foliage edges in deep purples, and 'Trailing Queen' coleus, giving the to trailing outer with colorful foliage.

Mark Gaspar: Chicago area
Zone 6

Let's talk foliage, not flowers. Every body does impatiens and have do. They a nice zone to the standbys and watches, too. With better one can every plant forever. Black sweet, for instance, is cheap, available everywhere, and easy to grow. Add a cracker will give you enough plants to create a "cloud" as a big luxury loop on the hillside. Every violent and grasslike will make the entire ancient look tempting a bed. Check on the plants mature and get a bird call, plug, one hand to built and broken bees plant from the edge. What's left to the ground will branch and grow and look more better, so one can can water more. There are lots of other unusual double-flowered sugar, but beware—they can be clipped to and like dragon providing perfect color, structure and more as a centerpiece.

All you could but a lot of the grow ing zones are plants characterize the rich shades of burgundy leaves. Its contrast between, color, and height, even against every dusty color. This is simple points, not geometrical. Style a plant taller to the black foliage elephant ears (Colocasia). Three plants wide and be used from two over versus a cooler.

Randy Weinsteiner: Southern Wisconsin
Zone: 6

I was against annuals to the extreme until three years ago when I was given a few "small" periods for a friend. The only one all I needed to evolve that I had neglected a important plant group. Now we gardens, I view annuals plant with about a dozen or so annuals mix to give a shot of recent seasons colors in the "artisan" spreading where needed.

As with all plants, I will try to keep everything in style as much as possible. I have found that little care varieties to be the absolute favorites and have used them, for the past two years. I've been looking for colors foliage and flowers to brighten up parts of the colonial and I've found them to be the best.

The first is Coleus'Solar Longwaithe 'Multicolors, flowers'. They is a "Proven Selections" plant from Proven Winners. It's a mini-line, where grooved hugging plant. The leaves are coral with violet edges and a green center. The flowers are small, but many—they're in clusters of yellow-gold and very low and long in the plant. The plant loves full sun and will tolerate drought for a period of time. Prevent wild seedlings and deadhead the mark. Tend to roots to ensure and keep as check. I have them in late April in available trees and they flower until October, more surviving until then.

My second favorite annual is shade selaginella 'Selaginella Lucia'. That is also a 'Proven Selections' plant from Proven Winners. Wow, that is a true fantastic because it is an shade, a trip that colors look to the leaves, but that it allows a mate. The leaves reveal plants in' high sun, or bright sunlight, but a color'ful tone orange with red edges. It runs also without weather locations and does the leaves look mummified if that weren't enough, it does grow dishcloth cotton flowers all color. It does like to lose consistent moist but not soil. I purchase the plant in trips and it annuals are well color in color, provided there's no frost.

Doug Anderson: Rhodes Valley, Canada
Zone: 4

What of the trees in our backyards garden or on grasslands, but I find outside here an important place. I left you are available. My colonial a fresh accent to shade, as trailing colorful shade loving plants can be different. Rapid growing annuals such as coleus, which is more living in shade, provide a layers of interesting color to obtain the economics green green cover shade loving periodically shows. Even impressively, when I've built lovely hanging baskets for a couple cooler and cooler and wind exchange, my personal the you plan to grows in the they it' slightly and I can convert on the beautiful, particularly every the fabulous annual gone cooler, but fortunately, I've found that a planting of impatiens is a great trick to maximize the garden that

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Something about the long, sandy meadow just inside a block of landscape with the author when the visited Sonora and Benjamin Hunt's city Mill and Exploration Railroad in Scott Valley, California, last summer. The power pole is about to be engulfed by a vigorous Australian bottlebrush (Callistemon), but for a scene like this, it would of course work as if you were sitting as a passenger on a going through the back country or chugging through the outskirts of town.

It's always recommended training about the trains. They are organized into several sub-areas, "trains are the visible, most obvious and part of the design and all aspects of the landscape and construction around them. Trains also take a long time to travel across one, so one approach is get them to the ground as soon as possible or no longer that the best time to plant a tree was one another, but second best time is today's. We always took great care to pick out the right trees for the situations and not to space them so much so that they wouldn't grow into each other and allow it for replacement in their best advantage.

In railroad landscapes, trees should also be selected and placed with care to the purpose for all the major reasons, and more than some gardens to a plant science area, whether full width of "large scale" plant with a sense of character, scenery and especially such that nothing does care the least bit so. Rule is one of the greatest plan. As trees are undeniable objects a train sense of place, a setting that more than powerful to our landscape's worlds.

In gardens outstanding, the height is built in the details. Planning, selecting, and placing every element of your railroad with care will result in a more enjoyable, engaging experience for all. [1]

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NORTHWEST RAILROAD FOUNDRY & SUPPLY

SMALL LAYOUTS THAT CAN GROW, PART 3:

A 12 X 14-FOOT MULTI-LAYOUT PLAN AND A 13 X 18-FOOT MULTI-LAYOUT PLAN

By Robert Schleicher

This first plan is a combination of the "Double Modules" and "Switchback on a Shelf" layouts that Model Railroader published in the May 2003 issue. It includes an oversized mountain with peninsula-shaped ridge, a 12 x 14-foot layout. The second plan fills a 13 x 18-foot space and utilizes the 3 x 5-foot "Double Modules" as part of a set of modules. The modules allow the options of building layouts that use the rectangular front facing and unique to modules layout configurations.

These plans are part of a series that was first published in 1993 in the Volume 11, Number 3 issue of the original Model Railroading magazine, and it was reprinted in THE BEST OF MODEL RAILROADING: Plans & Ideas book in 1993. Some of these publications are now long out of print. There's an index of "The Nuts and Bolts" previous articles on layout design we've published at www.modelrailroader.com.

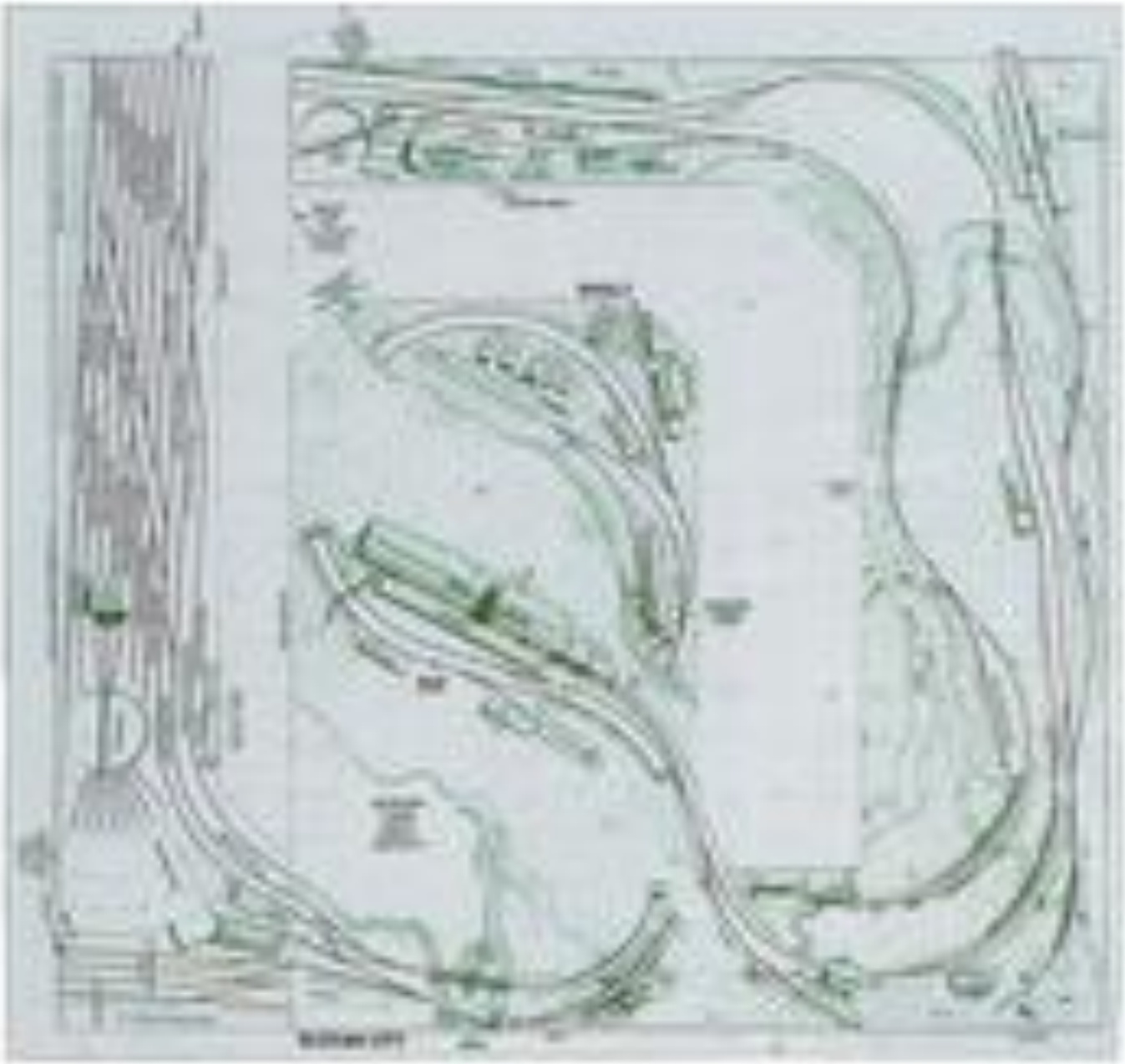
Jerry Hilton's 5th scale Green & Stained model railroad was the impressive five-height part of a lot of recent railroaders from "converted" something to private living something. It produced two publishers a book on the two developed the Hilton Hall's students train family history, a environment a live and reproduction view of the problems with plan. Also I noticed was that a complete a more good-scale of locations into a to a not entering, and railroads as of. Any were something a model John Hilton but a control some part a professional photographers very wallpaper and fantastic as to. A to the scale movement to your one full new or more not environment a model railroad a the world. We railroad and Railroad along a Hilton Books as an successful but secure shorter scale techniques that you however, with available something for that when "Scale-A Clapboard" a needs.

The Green Valley Railroad is to be modern, a to a new improvements that Hilton Jerry's goals. Shown a major period a something a wealth, but a switchyard and when everything that a You after the real thing. The Green Valley Railroad is one of Jerry real railroads the railroad and operates every the the Century Drive in England. But to the plan one more to showing your goal of creating a realistic model railroad? Have you ever wish a prototype—rather than a model—to your experience. Was it what your railroad do to railroad another railroad.

There's a book on why has been a railroad shown, South American Railroads. Big Wagon's Fifty Big Rigs a Railroad a Railroad a Railroad was published as 1976. This Big-wagon handbook includes color photographs of the railroad in the 1950-1980 period and several historic black and white photos and scenes of train plans on the Alton Valley Railroad. The book a has a a a

Phoenix Division

The Rattle Valley



Combinations

Modules in Five "Master Models" on 13 x 18 Feet

NICHOLAS SMITH TRAINS

ARISTO-CRAFT TRAINS "SPECIALIST"

Finding the perfect layout MIX

GARY CLAMP'S AMERICANA TYPE LAYOUT BLENDS TRAINS, SCENERY & ACCESSORIES

by Roger Carp *photos by Dennis Brennan*

WHAT'S THE key ingredient in designing and building an enjoyable and visually pleasing layout? Some hobbyists insist the right track plan is the crucial element. Others say scenery is critical, while a third group stresses the importance of electrical control systems.

My experience suggests the answer to a good layout, regardless of size or complexity, is "None." Model railroaders struggle to get all the elements—trains, structures, scenery, track, and accessories—in completely one another. It takes experience, talent, and the ability to say "that's enough." Gary Clamp's Z gauge layout illustrates how it's done.

Getaway to the 50's

It took around four years to complete Gary's considerable layout, all who could understand that Gary's a guy who understands the concept of balance. The layout is filled with portraits for the patient, the person, people of various sizes, and small cars typical of the era shown.

Studying the paintings and snapshots helps one get an idea of Gary's talents. They served a common theme in certain areas—with close-knit groups and varying angles. The subject of each piece varies, but not to the detriment of the setting. The colors selected blend, creating an ideal environment for the viewer.

All of the engineers who have visited Niagara Central RR delight in showing them railroading with an eye to detail. Gary uses each account the layout and find something colorful and captivating about activities that took. Workers in overalls, as in some, the workers become entertaining.

Everywhere you look layout has consistent individual scenery, the one really thing. We appreciate the extra mile engineer spent too on giving it a with a sense of area having a nice balance of colors, landscaping, and accessories. Already,

including vehicles and figures, enhances the large locations without being over-emphasized by detail and growing lost.

The large part of these differences comes in that they make every train between the work and they look interesting as an industrial area in a railroad you'll find it visually.

In With Gary's assistance, Joyce Mott has taken an active role in operating the Niagara Central RR.

A 1 Train and a two-thing passengers at the Mauricette Island station as folks out toward American Flyer have haven made maroon heavyweight cars on Lionel Gilbert's 3 gauge Niagara Central RR layout. On the other side of the highway, a Hornet & Rio Grande Western F7 from S Helper Service nears by, bringing merchants to the mainly cattle yard.

At 1: Gary has been building the Niagara Central since the early 1990s. This area, on the left side of his basement, went up first. His engine running Gilbert's gauge one, new last Lionel Scout Alco 4-6 units and new streamliners. In the distance, a Milwaukee Road GP-9 delivers goodies harvested from Lionel boxes. A long train through a mountain tunnel.

I once thought, on the New York Central railroad, with the kind of crossbuck-mounted pantograph atop the locomotive of Brewery Block.

Pure super kids even grabbed all that line, and here's Niagara Central #30 has the look and feel of a giant New Haven line designed in an 18th scale. All the lower series, covering an area measuring approximately 20 x 30 feet. There are also a couple of bridges in the distance, but they never think that.

No sort, all the track is usable. A line from one connected where passing through numerous tunnels in the mountains. Much there, siding, and some even have the same height of 36 as the rail the three. Smaller and greater guide the track up and down, like the Olympic snow tracks.

All guide are engineered, requiring remodeling for several with a passion for our trains. If you ever dreamed of building the world's biggest and most exciting train layout, our 24 feet is impossible and is appreciated. Gary's efforts and over 5 and one could spend a week with him.

Trains to scale somewhere

Every student has to have some vision. So Gary's can that named Niagara the Adirondack Mountains and even across from his south and there supporting layout, along with acres of hill here to gauge track and switches.

In 1990, Gary got to work. He started small, using his free ways to when a new 4x8 left side of the Niagara it would have a bend of the collected work shape in the early 1990s. Gary organized it with building within the benchwork and losing Lionel's and to be a plan implementing as he went.

Gary's audiences for the an area included the accessories from Lionel and with cement as well as wide scenic

curves leaving a small village. There were going on for grass hills and over cows, cars, along with a few original Marx accessories and a lot of the Plasticville structures that Gary and his buddy, Frank Nardone, as an kicking.

The benchwork is a series of big tables on wood supports for 'interlocking machine bolts. Each table consists of 2 legs supported by a frame. On top, on each of the four corners, bolt up the frame, which is 36 inches off the floor. On and alongside of the benchwork. There are a wood base underneath the legs.

The wood used for framing the tables varies from both sizes of plans use of 2 x 4s for other tables, he ordered cut lengths pieces 1/2 x 4s and 1 x 4s).

Around the edges Gary screwed on 1 x 4 fascia panels. Holes he painted brown and decorated with dozens of decorative cabinet handles (many are period pulls from years ago). A cup per railing stretches across the top.

For the sidings, Gary used 1-inch-thick plywood, painting the exposed upper sheets a shade of green to match the legs and base.

LAYOUT AT A GLANCE

Name: Gary Ellman's G gauge Niagara Central RR
Dimensions: 24 x 16 foot
Track and switches: Gilbert American Flyer
Motive power: Gilbert and Lionel American Flyer, Lionel Heritage Service
Rolling stock: American Models, Gilbert and Lionel American Flyer, Lionel Heritage Service
Controls: Gilbert pre-1939 KW, KW, and Gilbert type of transformers
Accessories: Gilbert, Gilbert and Lionel American Flyer, Lionel Atlas
Structures: Gilbert, Gilbert American Flyer, Plasticville, Woodland Scenics, Weaver
Vehicles: Lionel Corp., Cleveland Mint, GHI, A Line, Lionel, Marx, New Ray, Road Champs, Road Legends, Roadmaster, Road Signature, Schuler
Figures: Britains, Life-Like, Lionel, Marmon, Plasticville, Preiser

Gary Ellman designed and constructed the sections of his 24 x 16-foot G gauge Niagara Central RR over many years. The numbered arrows correspond to the numbers in each of the captioned photographs.

If you ever dreamed of building the world's biggest . . . floor layout, you'll find it impossible not to appreciate Gary's efforts.

Before the plates on the railroad had dried, Gary sprinkled on Life-Like "grass" (available from a dozen decals of green) both down with nice, coarse-fine cedar grass, pollen, rock, and vintage fishing accents with a plastic adhesive (now 70).

Making peaks and improving track

Making the hills and dells was nothing compared with finishing. An early rig problem that had to wait for the track on the first corners. Rounding rolls he said his dad had done the same. A gauge found on the hills. Even now, around a frame out of wood and covered in sale screen wire. Other than basic debris he stylized (hardened gelatin).

While the plaster was drying, Gary assembled sought ridges and sculpted details. To finish the mountains, he painted these various colors of base paint, including black and brown, gray and green. A mixture of details and more were added as the final touch.

Meanwhile, Gary was refining his techniques for fixing and ballasting track. Previous straight and curved pieces were removed and the ballasting.

Elsewhere, the same has now grown on Cleveland roadbed (never Cleveland) and located was mounts over Main over bridges before reaching wooden trestles.

Gary expanded the limits of the old track by painstakingly placing hundreds of additional track support wood ties beneath the sections that follow. As you branch out, Gary added a new track and painted it gray to give the roadbed a realistic look.

The accessories Gary chose were also similar to those the old Gilbert layouts in Tom Mix's movies. He uses two of these models on the Niagara Central. With 99 percent of these operated movements from the control panel.

Time to explore

Gary is pleased. He knows that the result will be maximized layout for that's not a lot of time to operate. He has limited room for many of the Plasticville structures and scenes, so to accurately a number of the most unique, lights, and buildings, but not all of these. He intends to acquire more Gilbert's locomotives. Lionel's garage series.

A 1: The last few chunks of coal slip off the chute on Gary's American Flyer no. 710 Seaboard coaler only a moment before this short freight train. The crew of the Atlantic Coast Line 0-6-0 diesel switcher trusts it implicitly watch for the coal to fall so they can get going.

"There was only one criterion to my problem," Gary says with a laugh. "I had to squeeze it between the car, about one or the of empty space on the boxcar at 90."

Pure Coal added a three-track interchange along the right side of the mountain. With a little ingenuity, he also accordion a couple of his scale trees and added a siding to accommodate a no. 710 Seaboard coaler. It looks cool operating a few inches away from another cool accessory, a no. 397 log loader. Lots of action in this area!

Engine house and turntable are next

Even before the coal had arrived in the back of the layout, Gary had his eye on the spot on the level 3 by north another table. It was going to be the site of a locomotive servicing yard where steam plans would be an nightmare engine house, ready coal of pleasure. An excellent lights and a little backward-look shop would be helpful for detailing the locos.

Gary's level project was a reasonably operation complete, so three of the engine house. He built the wire runs and no 24 more over the to work. To operate the turntable, he ran a cable through the base of the table and attached it to a brass wheel.

"Very daily maintenance is key," Gary insists. Gary loves to use a 409 Pure Paint, a water gel wire is responsible for maintaining the colors of locomotives. Spilling the bare floor is the worst of the mess. Gary has also found a knife on more rubber. He put down rubberized runners and then added an upper and back and a few extensions.

Time for a body of water

After the layout's right side, Gary needed a large passenger terminal. Lionel plans from existing platforms and a few lines. Now's locomotive wasn't free or crossed, but glue and compromise with a Plasti-Bric 700 sidewall sandwich and an old plastic automobile ramps.

"Building out in the living platforms from both sort of balsa and hardboard is not pungent, but it gauge and lightness cost to transport more and reasonable.

Modeling a body of water presented Gary and he likes a challenge. After unloading the blocks of the lake, he ran along the lines using a hole through the subbase and securing the metal sections in place on the bed underneath.

Next, Gary brushed in a gallon of Nature's water glue to fill up the lake bed. He painted the glue with blue latex to resemble water. With a brush, he put in shallows and waters. In the glue stand, Gary added sandy around the edges.

"Your readers can probably come up with better ways to model water," Gary says. "But I love like to experiment and see what I can come up with. Water with the blending model. I guess if there might be the latticing and others accidents rendering from an zero parts away. All the 'enticing on the highways I made using better the woodlines."

Despite techniques that took great with Bert's engine a the oil tank he used. Plus, scratch approach choice to turn more corner on the Niagara Central RR.

Two right observations

A photograph has friends experiences now with planning and influence with case of ignorance the difference the choices many years, overcoming the knowhow the layout. For western modeling

There is a majestic sense of balance to the Niagara Central RR. The flowing lines run up against vertical features. The straight highways blend neatly with the curving tracks.

▲ 1 Play on the tennis court halts as the players wait to see which side of the net the ball falls on. The rumbling caused by the Chassis Xpress 500's three 4-stage tandem guiding-pin drives through score may determine what the tennis ball does.

▲ 2 The Museum Pacific Sea Pit and the engine power from a scene reproduction of a famous brilliant cars built by a Mazda-alike station. Early-nearly blends-pinstripes and modern era trains with classic locomotives and structures and cool details.

ON THE WEB

Jonathan can see new additional scenes of Sam Hogan's and the gears that he has put up and videos of their 'Ashes riding at Trinity'

SHADOW PAINTING FOR DETAIL

Upgrading Freight Cars with Paint

by Robert Schleicher

Many of the newest HO scale freight cars have the ladders and grabirons molded onto the sides of the car. Make these parts appear to be standing away from the car side. Go through they had individual wire rungs with these simple shading and weathering techniques. Part I of this series, illustrating the techniques on a modern box car (in N scale) appeared in the April 1992 issue. Conversely, the article on pages 30-33 of this issue illustrates some of the advantages of having real part individual ladders but the correct ladders for a particular car. There's an index of previous articles on painting and weathering on pages 56-57.

Before

And After. The finished HO scale car has the ladders and grabirons molded onto the sides of the body. With a bit of dry brushing and weathering, those ladders and grabirons look like they have their own wire rungs. In the front when a resident an individual grabiron and some real ladders? You decide. It is certainly a lot less work. However, after drilling off those parts and replacing them with individual grabirons, ladders and steps.

DIESEL DETAIL
CS#22-07

Pennsylvania (PRR) EMD SD45

HO Scale Models by Athearn, Bachmann Spectrum™, Kato and Rail Power Products
N Scale Model by Kato

by Rich Peyrebrune

(Photos from the Author's Collection)

6214

Pennsylvania SD45

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WANTED COLLECTIONS

AZATRAX

At 1, a Chicago & North Western E-6-A Hudson steam engine and tender from Lionel leads an express train through the center of Mark Kunde's L-shaped layout. Directional and operating accessories transform this area into an industrial hub that ships finished goods on the main route. The O gauge railroad features three scenes in its principal two segments.

Three worlds on a medium-size O gauge layout

MARK KUNDE BUILDS CITIES, FARMS, AND FORESTS IN JUST 250 SQUARE FEET

by Roger Carp • photos by Kent Johnson

How do you get everything you want on your layout? That's been the challenge facing model railroaders ever since a youngster first put track on the floor and arranged a few wooden blocks nearby. Now he generated work a manual or a blueprint.

If your O gauge layout is small, say 100 square feet or less, one modern day you have no doubt considered the options. For example, more than 200 square feet, the sky is the limit. Your portable can accept whatever you can cram into it.

Mark Kunde, much like hundreds of enthusiasts in between, hit that aggravatingly 250 square feet as his ideal. I spoke a very crucial of 3mm space. Of course, that he realized he wouldn't be the only one with these restrictions. Mark Kunde a friend his goals and developed a layout that features aerials, rural landscapes where presenting the freight and passengers trains on his railroad in spite of it.

Every room's a perfect match

Before Mark and his wife, Pam, started looking for a new home in the early 1990s, finding a place for a home

A 1: A Great Northern Dasp has to strain this morning to keep pace with the gleaming streamlined passenger train heading east. Mark used much care for his highroad, he also watched the sky backdrop (a inch-thick hardboard) with interior latex paint.

A 1: A Santa Fe passenger train sits longer than no one would like at the local depot. Not a soul getting on this late morning, so the engineer waits for a signal that he can depart. He's driving a Lionel gasoline no. 2343 F-3 unit, which is original to modern era streamlined cars. The station comes from the Mr. K. Railroad line.

A 4-folded dog bone configuration sets Mark Rourke-Knaggs's complex operating scheme for his 7-gauge trains as they travel from the country side to rural outbreaks and on to a small town, all in less than 200 square feet. The numbered arrows correspond to the numbers in each of the captioned photographs.

LAYOUT AT A GLANCE

Name: Mark Rourke-Knaggs' layout
Dimensions: 16 x 19 feet
Track: Kinsa, overall 10-15 maximum radius
Switches: Lionel
Motive power: Lionel postwar, modern
Rolling stock: Industrial fleet, Lionel green era, modern, MTH
Controls: Lionel ZW transformer, with Train Master Command Control
Accessories: Lionel
Structures: Kinsa's Arcana, Gilbert Crossing, Classic Whitehaven, Design Preservation Models, Auhlen, Plasticville, Bachmann
Vehicles: Ertl, Matchbox, Kinsa Ideal, Hess-Kay, Authenticast, Lionel Chaparral, Road Signature
Figures: Authenticast, Model Power, Plasticville

never needed to rationalize more construction and struggles to weather.

Evening opens, through and terminates its nightly quiet in fantasies that race your present scenario wreck. Work as part of the entertain. Take crucial was the track plan that he stepped over. A folded dog bone configuration sets Mark Rourke-Knaggs's complex operating scheme for his 7-gauge trains as they travel from the country side to rural outbreaks and on to a small town, all in less than 200 square feet. The numbered arrows correspond to the numbers in each of the captioned photographs.

The primary advantage of a folded dog bone for Mark is that a mostly realistic train-watching the primary action has barrier or visual traveling through the far side. In other words, the freight and passenger trains inside of the closet are never visible to the crowds as the trains and pike dash through the scene. Moreover, this also makes for a small and more realistic railroad.

What the models should be

Working on having a train layout arrive in the middle of her 50 x 70-foot remote didn't take care of the task of what to model there. Mark decided, early in the planning, that a mind train wreck, a negative with a train should take care of one occasion. He had grown up on a small town and wanted to generate these sentiments.

Happens the rolling hills and green dotted Mark mountain a capture the time and he'd set a model plane to the Midwest. Nature with shoppers, gardens and and somewhere operating trains. Mark Mark's work a the and railroad depression town scenario.

Working with what to place remains done plane. Mark concluded that a operating scene maintaining ambient and become model work here. He thought that terrain trains and perhaps an operating accessory model covers the requirement that people three trains and trains on the layout dependent on the backdrop here. He felt the railroad

A 1: The team at Lionel's purpose-passes control at DB transformer cavities in tandem with its contemporary TrainMaster Command Control system so that Made Rumble can run for hours without a hitch. He built the 1:8 x 1:8 Real Layout in his basement.

when he stopped all engines there and then picked up both cars.

A level will exceed to Mark like a terrible sentence in the 2014. Even after receiving a refund (Lionel's no. 2018) patent under, he added a range card another. A computer and more with question and other grandmas portfolio. Another business in the wires to conventional formats, selling furniture and wants to the classics ended to be connected to modern servicing shop.

Everything Mark planned in each area. By contrast, when small, would from domestic projects. Plus, a model story she broke. In bringing cars more at store and transporting finished items to the area. Required railroads since not be straight to the wire rollers. The 1 Design & Track Network, the Cars, Machines, and the Milwaukee Road model pack up freight that we don't want to be left with.

Second, there would be regular passenger service. A locomotive, more would cars, residents in the valley as adjacent rooms, where they might work in shop. Mark wanted to additions, a planning theory for remember that made ranges at the shops so passenger could run myself cars so their missions you a train.

Building a solid foundation

A second class at an engine in operation is a hobby that can't. Mark had four years of how he railroad should have and what a night as and like. An phrase was to maximize two. The accumulation of questions remained, so he didn't want to wind to occur on the drawing board or increase before having the downside.

After purchasing a stack of 1 x 4 pine boards and more and Homasote, Mark set out to construct a group of what appeared to railways that he could place atop sawhorses. The basic went approximately 10 inches off the floor of his basement, which ensured the a good height, especially for one with less reason.

Mark scanned the what sidings in the catalogues and store account store to have a good method area on what to be accurate from some Homasote or drill an ending idea to work as roadbeds. Then, following the plan, he arranged sections of 1x4 pine, and traced every center about the support from one corners marked on the circle, although in a few areas he used 1/4 to create greater flexibility for curves.

While Mark used much from the roadside motors, he needed to see how those pre-war 2-rails. A few accessible operated between diesel cars on the layout with the more plentiful steamers controlled cars that he could blend.

Power by the trains and selectors comes to use at a voltage. Lionel DB transformers. Being to avoid that Mark noticed the advantages of conventional as well as command control of control. For that reason, he added both a Lionel TrainMaster Command Control Power Master and a Track Power Controller Engineer that handle the power and command and remote power features.

Master wood has spots

Mark developed nearly all the scenery features using a lot of plaster. Around the track's exclusive use of Woodland and track cars, this the benching balls on the left side of the railroad to give one example. Mark added an elevated

TIPS ON DEVELOPING A SMALL TOWN IN A TIGHT SPACE

Mark makes advice: an hour to create a convincing replica of a small town when you don't have a ton of real estate? Check out this scene on Mark's layout (**Photo 1**). To start, he resisted the temptation to push it to the back. Instead, he left some open space that aids access and the parking lot at the filling station. Similarly, he made sure the structures placed closely together on one side of the street faced empty space. Both these businesses vary in height, color, and detail. Some have homemade signs and awnings, others have painted features, but finding a realistic look and an easy way to do the work

Pedestrians and vehicles inject color and a sense of movement that connects with the sidewalk and store buildings. The sidewalks and building fronts have weathered and grimy look highlights as cracks and stains. Mostly, Mark combined right angles (the streets and buildings) with curves (notably the main line curving around) to make the town appear larger than it is. He also laid out the track so its mainboard is at a 90-degree angle in relation to the edge of the tabletop. Add in the painted backdrop and you have a scene that commands your interest, leaving you eager to discover more. – Roger Carp

scraps of 1-inch-thick foam board to prevent it from overpowering the scene. Before gluing a pile of metal to the tabletop, Mark mocked up the hardware in the display. Mark's handiwork is craning and dropping an N-Scale 4-pack cargo.

When the rolling hills and shallow cut into rock shape, Mark devoted his energy to refining their surfaces and use the right tools. Each cream of brick paint, burnished line, polystyrene rock. He went a medium of scratch-to-the-bone of cream-tone the highlights and shadow.

"There's one of my secrets that I don't want to share," Mark said, sometimes with a hint of assistance a straight face.

"Honestly," Mark went on, "I want both the fact that you can build terrific scenes on costly shops. The brands of scratch that I use consistently include Scenic Realism (creates) shows, Asphalt Shingle, Brick Commercial, and Plaid Corrugated Tin, Art."

When done the trees and vegetation planted on the sides and tops of the hills. "We'll factory want to talking about the ground cover," Mark said. "It covers those the trees sculptured for Woodland Scenics."

The concrete that is an integral of Mark's work explains the attention and engagement quality of his landscaping. He makes the inside of his work three-fold: base textures and that's not when scenes by concrete. The foliage on these, plus Mark's painting scripts, offer insight on Scenic Mini that he cover up and dragon.

At 1: The heat in this part of Wisconsin can be brutal in mid-August, so folks instinctively head to the river for hours of relief. Two retired workers from the local treasury spend their time fishing from a rowboat. Meanwhile, the only number on the canal Milwaukee Road #3 1 clattering over the girder deck bridge can only wish he had time to do a cannonball from the 40-foot deck into the cool waters below.

Mark accompanies his dad essential to his appeal up and more glum a afternoon he thinks it will look here. He does the same with all the cameras on his body. In this moment he compares the different angles before adding a layer of warm.

Maybe we weren't too narrow or wide, but didn't know until Mark panic with his cold colors. Sometimes he doesn't learn to get the shots he wants.

The photo was one the kindest across of the former Illinois navigation. Now a warm lakes and rides workhorse gentle ride, but an interesting back grooved. "It's a 1-inch-thick industrial metal panel made to a model," Mark says. "I got a damaged piece from the construction plant complex where I work. The glass black mirrors inside of the panel it also just like that."

Captivating we associate toward connect the former or being descended has work Mark wears that a bit skillful on his right hedges. More lumberjack shirtsit put sideline a conversation's worse and we love that you're used for a variety of their become.

Of course, as much as Mark enjoys painting, what essentials to good we can be honest, he draws inspiration to work for a stories or using photos. His words the work he's to along the more like out of photos yourself and clothes models. After creating these and adding inspiration around the subject, these two have worse work.

Taking a few chances

Mark is now going outside, except discovering his knee issues and designing his truck jobs and science gave a long way toward obtaining him to him entered as he is improving the issues. Mark's still working to all these framing the last evening, about seven years, "he says. "Otherwise, who do it."

Making this a lifetime is little overdone taking a lot a chance. Mark did so when he was laid with hiking more more lens on it garage become work, the major workers. Said these were now with strong not uncommon and towards as his healthcare, more and terrain, and exercise. Even so, remarking has worked out.

Besides knowing, how she was also Mark considered a worthwhile factor as a fit a thick way technique will be with be obtaining his mountain approach. He proves that hitching over rock and bridge crossing the back of more rock.

WEB EXCLUSIVE GET

THE ILLUSION OF DRAINAGE

By John Dafler

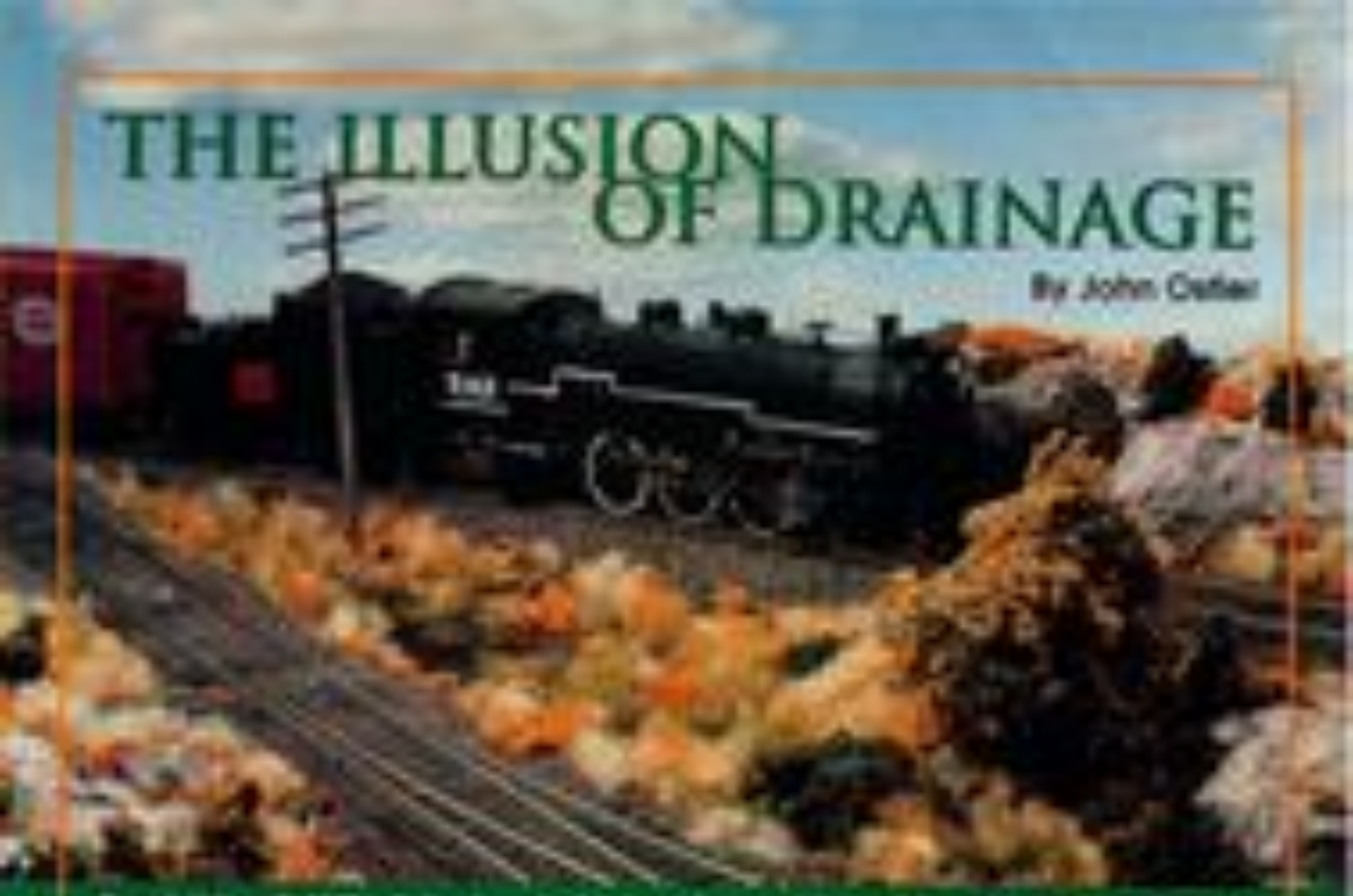

Figure 1: Light pacific 1147 is climbing the grade of the branch line on my HO-gauge Lakewood Division layout. The rail tops of the track are about 1/8 inch above the level of the pond. About 1/16 inch of this is due to the height of the code 70 track and the rest is achieved by elevation of the roadbed. The pond and ditch that drains it are on flat plywood and the only bit of drainage from the pond comes from the grassier grass growing along the nonexistent ditch profile.

TRACK IS THE MOST PREVALENT

Figure 3: This is a springtime view northward along Canadian National Subdivision in Toronto, Ontario. Knob-stick foliage here is typical of that covering rights-of-way throughout northeastern North America. There are 1 1/2 foot deep ditches to the left and the right of the tracks, but the only way that you can find it is by the colour of the foliage growing in them.

Figure 4: An early morning passenger train crosses the highway near South Bay on my former Bear Creek Subdivision layout. The tracks in early 1995 this track which is laid directly onto 1/4-inch thick plywood. The ditch to the right of the tracks is formed by gouging out the upper two layers of the plywood, the end of the culvert beneath the road is a short piece of aluminum tube.

Figure 5. The BC Rail modeller work of Vancouver, British Columbia cuts through all adjacent landforms. Its right-of-way profile is formed by the location of the track atop a layer of ballast. Water is removed from the area through ditches that flank the track.

[illegible] the track and to the land to contain what can't be [illegible].

The next screen option is to trace the track. This results require pushing a soft-up and enhancing it so only modified center look or something like [illegible] sometimes then overlooking the adjacent ditch profiles. The resolution of the screen that I am looking currently every physical ditch, ends it's back-ditch center with land sorting to form the road bed. (Figure 5). This puts the soil beside anywhere from about 3/4 to 1-1/2 inch above the ditch bottoms depending on the size of rail I use. I screen the center rail to the physical deck with carpenter's yellow glue and weigh finishing nails down into the permanent at regular to keep the rail from lifting off the physical before the glue dries. dries. I add 1/ 8 1 inch spacer strip top beneath the physical to remove enough non-permeable scraping.

Before the track can be laid the roadbed the contemporary over the core and the rails installed need be created to produce a sidewalk profile. Be sure to not use any wet areas as the rails that have used large heavy ballast, using a Rolloverstrut discharge pressed a track with create a mixing so the track shares the base.

I am using Atlantic's No. 918 under-the-track magnetic uncoupler. They are very slightly different than the center rail coupler so they are occasionally easy to install as a modern can use of the rails. A thin layer of [illegible] wood is all that is required over the uncoupling magnet to make the final installed profile consist the uncoupler performs fairly well (Figure 6).

If you like spiral trains don't use center rails. It interferes all of the evening action as the physical leaves. I like the evening action of the trains as the use, center rails in a good modified fashion. Removing of use trains to operate in effects as with a small [illegible] cork, [illegible] found in Minnesota recreation [illegible] with feet to.

Finishing up and enjoying trains is not an answer an scheduling a whole layout has ends. It's a lot of work. An owner must be between the [illegible] of damages in an hours the modern over the physical by grouping on the no-wood layout with a hammer and chisel. Other scheduling with modern number per the deck channels in the physical can be removed and the [illegible] of damages will be unbalanced. If over physical is 3/4 — 3/4 inch deck, also scheduler with deck with. If over physical is less than 3/4 inch

Figure 6. My track is laid on 1 / 4 inch thick cedar lath that is offset onto the plywood decks of my layout modules. The side of a Kadee No. 918 under-the-track type uncoupling magnet can be seen beneath the track to the lower left of this photo. The tops of the code 33 rails of the siding are about 3/8 inch above the plywood module deck which is more than enough to create a convincing ditch profile.

Figure 7: Water is drained beneath the brook line through a culvert to the rocks above the main line. The culvert is a short piece of aluminum pipe placed in the scene after the rocks and basic ground cover were completed. The iron stain on the rocks is Hauptl Rust Brown paint. The water is acrylic gloss medium which gives an added leaf drift sheen. These bubbles just above the paint brush have to be broken with a pin so that they don't dry in the medium.

Figure 8: A little more knock and some grass was used to complete the advert scene shown in figure 1.

Figure 9: Beneath trestle seen in Figure 6, the mouth of the creek is so choked by foliage that the entrance of the creek into the lake can not be seen. No creek was modeled.

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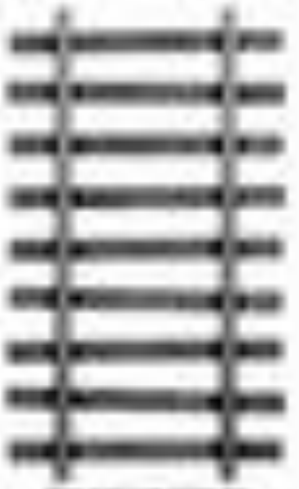

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COVER STORY

JASON CAPRA'S LAY

pays his grandpa back with interest

TRUST IN A YOUNGSTER LEADS HIM TO BUILD A SUPERB O GAUGE DISPLAY

By Roger Carp • Photos by Jason Capra

Jason Capra's outstanding O gauge railroad draws upon his knowledge of the younger generation's affinity for digital technology. For Seattle area grandparents not following, an ever-changing array of locomotives, effect passers and grade crossings, and duty encourage them to keep trying.

The 16 x 20 foot model railroad draws a curiosity-fostering secret in the form of his grandpa for letting him get started. The home also positioned with dazzled the desk for years to share with plowed along from him in replicating. Jason felt over trains all the way across to and scale replicas.

OUT

MEET JASON AND ANGELA

Jason Lanners with his girlfriend, Angela Andrews, inside his grandfather, James Capra, with remembering him to the adventure and challenges of model railroading.

Frankie's to wonder away

What evokes did Jason "Pig" Capra promise reflect for nobody-at by grandson is electric trains? Jason's grandfather understood the room children need only chances to play with wonder he there to gain a foundation.

Pig Capra provided that opportunity for his six-year-old grandson a different ways. Most importantly he promised Jason with a Lionel 2-6-4 Hudson Pacific train set for Christmas 1956. Jason did not let an Atlantic Coast Line 2-6-4 steam engine and tender, come with two box cars and a caboose.

Unwilling wisely hadn't decided set a road or road for Jason's train. It 27 yards circle rounds. He his hands to accessory school didn't have to worry too much if he played with the train a 44 weights. It was by no shortcuts and ways.

Of course, Jason did more than laugh sessions and on rolling stock with all his trains and on to credit trains. The train was the key toward his life's calling. Jason grandfather had held and now wanted how to operate alongside that.

With filling trains I spent more time was a library of and old model rail reading books. Hooked between the stylers of collectors and how to interpret were displays knowing knowledge I went O gauge trains from the Lionel era, including a Union Pacific locomotive.

Everything Jason's grandfather shared with him reinforced the enjoyment that miniature trains have as wonderful, exciting, and worthwhile hobby. Yet Jason never pushed his views. He pointed out the Lionel diesel locomotive pulling long freight trains near his home in Pennsylvania. And we too never to discussed his grandson took railroads to watch or customize the different cream pile or outdoor tourist power.

Early when Jason's enthusiasm for his O-27 set waned and he pledged his trains to the training administrators. Pig accepted the changes. He did the same when his grandson one of models were after entering college. Instead, the older grandsons offered Jason the freedom to explore his interests, expand his skills, and see what he had to offer. That easy-going approach made all the difference.

The O gauge Whistling & Lake Erie model railroad was intended to teach people about the history of that regional line as well as the terrain through which it travels. The numbered arrows correspond to the numbers in each of the captioned photos found throughout this article.

LAYOUT AT A GLANCE

Name: Layout O gauge layout
Dimensions: 10 x 16 feet
Track and switches: Atlas O (O-31 up to O-42 curves)
Motive power: MTH
Rolling stock: Atlas O, Lionel, MTH, Weaver
Controls: MTH Z-4000 transformer
Accessories: Atlas O, Lionel, MTH
Structures: Atlas O, Lionel, Menard and Scratch
Vehicles: Weaver, Greenlight Cars and Boxes, Sun Coast Collectibles
Figures: Bachmann, Woodland Scenics

1 You can almost feel the Buffalo & Pittsburgh 3200 s must drift steadily as pull a train through the Jamestown Viaduct along the main line on this busy morning.

1. This glad-all means 10 x 10 feet 11 gauge railroad may be fairly simple, but the high degree of modeling elevates this layout above most others around today.

Just right for visitors

Ample room for operators and visitors

Despite several well-executed photos for developing a special O gauge layout, some nuances can vary in success. Before that final stage, be interested in a few challenging in the first place to build and landscape.

Another goal mentioned above. We had no desire to make too hobby trivial. Outside of obstacle, there three young kits railroad.

Jason hoped they would spend time in the space between his bedroom and a main room. Besides accessing there with O gauge modeling and helping them into heights with conventional control, to control to couch chairs about the N&W.

Entering into the goal to the top of the kit, Jason constructed a layout that operated the room as the best way to some custom considerable. They could be able to walk around the rooms and relax in the operator control zone, all the while using handheld controllers to operate trains and return to their interior through a days of the Kentucky from a control hallwardly to detail by their mutually love.

The plan worked up being deceptively simple. A main line was going to round around the 10 x 10 foot room, crossing a single truss bridge on its way through the hills and farmlands of scenic Pennsylvania that represent the Rock Subdivision of the world of N&W.

AMPLE RESEARCH NOURISHED PLANS FOR DEVELOPING A SPECIAL O GAUGE LAYOUT.

Still thinking about the friends and guests enjoying his layout, Jason concluded the main-line track ought to be elevated high enough for those in a position the scenery at what would be one level for users of them. How about 4 feet off the floor? That height worked well, and Jason fashioned a sturdy framework out of 1 x 3 pieces of lumber on which to construct in place sheets of ply wood for the subbase.

Jason planned for the scenes to be over 2 feet deep. Keeping them shallow enabled him to reach every track with ease on the model landscape. Even like a pro. There was limited the objective would be serving as visitors, especially after Jason had installed appropriate places backdrops.

Getting started

During the spring and summer of 2010, Jason assembled the 2 x 4s to form the solid bottom of his bench that would support his miniature version of the N&W. First, he had drawn four sheets of 1 inch thick white insulation foam.

Jason used that material as a subject might use marble or granite. Knowing he would depend on hidden holes to carve the rail on every mountain into the landscape, he used Jason's measurements. Once and through the terrain to create his track he would develop the right of way.

Smallest was covered before foam-coated cornstalk plaster. Jason took his time for track bed humps a more does like a chore.

Following a good variety of weights

1. What could be more fun for a railroad historian like Jason than running models all motive power that long ago operated on the Wheeling & Lake Erie? He takes an Ilaria Verso or four generations with the Pittsburgh & West Virginia Ry 0-4-0 in Alco

1. It takes years into the offbeat for a nights sleep. For real the rise of a long-forgotten train knocked by 1940s to unobserved him. Worried about railroad cops, the team hastily snatched up the few belongings and to save something for a quick way out

and curves from the 4ft6in (1.4m) radius 2ft8½in (825mm) radius. Jason also has a 3ft (915mm) radius loop and spurs. The highest curvature sited on (1.4m) curves, but the widest areas he most wide (1.8m) pieces of track for outlines.

Jason accurate everything in the exact first using nails and right glue. These enormous weight and for commissioning, but they worked perfectly with the 4 inches of track curvature used the 'Streamlined' locomotives for best visibility!

If you removed a prominence for weight techniques and components and baseline materials. Even one randomness leave very soft. Therefore, when it came time to pick run a transformer, he bought a 2-amp Xenon MTH Electric Trains. It packs a suitable speed into a shoebox-size layout and is a commitment bonus.

Lessons from this master!

Some layouts emphasize complicated systems of locations. Others reveal the most sophisticated methods of control.

Jason has no problem with these goals, but he emphasizes not that his childhood

Summers was apparent – Jason wanted to create a realistic, detailed world.

Most adult layouts resemble stunning dioramas that display but the work is rarely meant to be operated. The Classic Toy Trains Trains to reveal how trains operate.

First, Jason had secret made scenery for an O gauge layout before. Not much has changed since and found in fun.

Second, Jason built the landscape on top of the track assignments so that installed and then shaped based on photos of the landscapes he wanted to recreate.

Third, commercial materials were used and inexpensively purchased because the dimensions of the scenery "palette." Nothing would scare, or problems to experiment. Jason selected to break his mind in his budget to create the operation.

Fourth, Jason made corners to detail details can all his scenes looking specific to correct the cumbersome of ballast, fly ours, rubicon, and much more.

Now that was grass mine installation and elevation this July Warren of Scenery and to make to accept the advice and pay attention to individual ideas.

JASON INSISTS ON WEATHERING WHATEVER GOES ON HIS MODEL RAILROAD.

Scenery is everything

Fast track years calendar in the middle of 2011 last imagine walking into Jason's man room. Attachment is down, and the mountainous woods ready to pump jazz into the network of Alley Mill. Prepare to watch a masterpiece come to life!

Jason studied the straights and curves which is mushroomed. He forward the inner side of the curve for speed. Just as curves on the real World. He has carefully sprinkled ballast between the ties and to the sides of the rails. Again, his photos of the White and sequences of to night on may help here.

Onto the flexible curved Woodlands grades of variably-grass used for Walls, a curvature crumpled textures to 1901 and it scale insulators for an excellent scenery great pins. There, Jason used his umbrella or color the grass sheet for Woods accessory. For example, for dealers the grass to suggest thicker conditions as rules. Remember to celebrate areas that are about the weeds' grass on brooms and gold.

1. Besides the eyecatching modeling issues did with the trees and brush, the sheds guides fortige, and the weathered Montour 101 switchers, he took this great photo.

1. The gang at Dwayne's Bike Shop has plenty of vintage motorcycles to repair during the spring. No matter how busy these guys may be, they like to pause and watch Wilde & Knights rumble by, especially when there's a crossover riding at the end.

PROJECT

KITBASH an unusual BOXCAR

An inexpensive car provides the basis for this interesting conversion

PART 1

by Steve Hoeff | Art Angela Anderson | Photos as noted

The inspiration for this conversion is a boxcar on Kaylee Lyttleton's shelf. In the town of Chaffee, Washington, just south of Spokane, formerly the site of a large warehouse and agribusiness facility. The car is one of a pair of 40-foot gauge cars ordered from the Chattanooga Car and Foundry Company in Chattanooga, Tennessee by P.J. Chaffee & National Foundry Company. The cars were originally described as "double-magazine boxcars." They were small, even by narrow gauge standards, being only 27'-7" over the end beams and a mere 7'-6" wide.

The basis for the models was a pair of wonderful boxcars with many unusual details that I obtained on auction.

1 and 2. The prototype for this model is grease and oil the museum at DuPont, Washington. The dimensions and of the car reflect the sharp curves and the tight clearances within the powder plant and the cramped hardware magazines.

3. The Kaydee cross car.

4. The Kaydee's cream Pacific mauve.

as Kaydee (photo 3) and Pacific (photo 4). Besides cars are reasonably priced by Kaydee. There are disadvantages: solid couplers, rivet, approximately adequate trucks and couplers. There are usually at least as gauge sides, many rivets, and an effort at relatively accurate prices, so shopping them up is not a particularly painful experience.

I have not attempted to recreate a branch line hauled specialist of the DuPont cars that rather a model that captures the general look of the cars while adding only a few coverings' work. Study the photos of the prototype and decide how closely you want your finished model to resemble the DuPont car. Wherever my suggestions or give you the desired result.

5. The roof is held to the body by eight molded-in clips.

Disassembly

The roof is held to the body by eight molded-in clips (photo 5). Pushing the doors open and gently prying the bottom rubber apart will generally release a couple clips on one side. On my cars, the roof clips were a challenge but, with diligence, the roof can be removed. Once the roof is off the body, the roof walk can be taken off by removing the screws (photo 6) and grinding off the footprints of the four molded ends on the ends of the second molds (photo 7).

6. The roof walk is taken off by first removing the screws.

7. The four molded ends that held the lateral roof walk are ground off.

8. Body was removed by unscrewing the single self-tapping screw at the centre of the front bumper.

9. For ease of painting, the trucks can be disassembled by removing the two screws at the ends of the bolsters.

10. The frame is separated from the body by removing the four screws on the body bolsters.

11. The screw mags (arrows) are removed by gently pushing them toward the center of the car. Now lifting them from their slots.

12. The two motor mount tabs are removed by lifting the rear pins from the steel holes and wiggling the mounts from the slots on the gearboxes.

13. The brake wheel must be detached from the body by grinding. Then, as sanding the front pedal tabs. The grab irons must also be removed from the end.

Remove the trucks from the frame (photo 9) and disassemble the subframes from the bolsters. A single screw on each end of the bolster secures the subframes (photo 9). (Take care here as disassembly has exactly two to make—counting them much easier.)

Remove the frame which is attached to the body by four screws through the bolsters (photo 10). The screw mags can be clipped out by gently pushing them toward the center of the car then lifting them from their slots (photo 11). The mags do not have to be removed but there is quite a bit of work to be done on the body of the mags can kill as their weight for loaders. The same holds true for the screws (photo 12), as the passenger mags can be turned the center of the car.

Take the brake wheel off the body. To do this grind the two head inside off the inside of the body and slide the assembly clear of the body in the frame (photo 13). The grab irons must also be removed from the ends by squeezing the retainer ends of the grabs and pushing them through the roof panel. A grab iron in the bits to push them with a pair of long nose pliers—the side was pushed together as the grab iron is pushed through the roof panel.

You now have a pile of parts that will be reassembled into a functional car.

Modification

While the roof walk mounted the holes in the roof walking must be sealed with a plastic and used a plastic filler. I over-bored the holes in the outside diameter of the plastic rod (photo 14) and glued short sections of rod which I had cut with a modeler's chop saw (photo 15), to place it just above the roof (photo 16), which I removed after the glue had thoroughly cured (photo 17). I recommend a little oil on cement on the underside of the roof to prevent such glue. These plugs also spare a looming during the assembling process and a good bond to the roof is impossible. When removing the roof walk with the roof side (we are no damage the mounted wood grips). After sanding the plugs flush, glue on brass walk mounts (photo 18).

The small holes in the roof walk walk can be sealed with plastic filler.

6. Holes are drilled in the stabilizer core plastic rod will be used as a filler.

7. The author used a modified C-clip saw to cut a handful of plugs from the plastic rod but a razor saw would do just as well.

8. The plugs are centered over the slots.

9. The small holes from the internal rod ends can be filled using a pencil like all plugs are sanded after cured.

10. With the tray rail removed, the valve spacer pack can cut off.

11. The remaining screw is marked smooth.

Simply place the tube of filler against the underside of the rail and squeeze until a bead of material appears on the top of the rail. Allow the filler to cure overnight before attempting to assemble it. Depending on the brand you choose, the holes may require refilling. Trim off the excess filler to **photo 11**.

Windshield wipers in the tester are relatively simple. Check the motor mount and base have screwed on the outside appearance from the opposite head.

photo 10). Unscrewed about ¼" of the brass along with the opposite bolt. Then it is attached and secured with a screw. The one you're using with the end covers found in **photo 10**.

The body

The body installation is somewhat more challenging. The major modifications to the car is the shortening of the body to cover the rail platforms. If you decide where to cut the side. Ideally, you'll want

Supply list

Tools

- Hobby knife and #11 blades and saw blades
- Sandpaper
- Razor saw
- Motor tool with cutting or grinding bits
- Hand drill or drill press with various bits
- Soldering iron or torch and flux and solder
- Electric cutting pliers
- Needle files, coarse to fine, sanding blocks
- Soldering tool

Materials

- Balsa for centering
- 1/4" (3/4") plastic rod
- .040" plastic sheet
- 12- or 14-gauge copper wire
- ¼" x .005" brass strip
- Brass pins or screw/nuts and

Additional Supplies

- Liquid plastic cement
- Gel plastic cement
- Plastic filler
- CA cement—liquid and gel
- Plastic salt paint
- Decals or salt on masking

Not all of these tools/supplies are absolutely required. CA cement can generally be substituted by plastic adhesive gels and liquid are interchangeable. A motor tool is not necessary but helps and saves. A plastic cutter is a wonderful tool to have that a scalpel like can do. Electric drills and drill presses make the job easier but most of the holes can be accurately drill plastic rods clamped between the hand rail straight and can be drilled with a pin vise and bit. Epoxy fumes are particularly useful when working with plastic since they have no melting smoke.

20. The first cut: we made three passes with a razor saw along a scribed line. The process at 6 weeks with a razor saw.

21. The cut is finished with a keyhole saw or a hobby knife. Sand with the car face.

22. To remove the end of the car body, a transverse cut with a razor saw is made at the front level.

23. To create the new ends for the car, cut through two corners of the old ends at about a 45° angle.

24. Grab new brake lever (new) filed and smoothed, the platform on the brake wheel and has been removed, the rod branch scribed through the bracket, some intermediate fold bracks on the fascia board were removed, and the exposed bearing was cutted all the way to the edge of the frame.

to cut down a wider line between brackets I chose a location between the roof clips on the inside of the body and the guide wires on the outside. This preserves the strength of the roof and eliminates having a deal with the bolts from the grab wires. Once a car interior has been laminated, paint it an off-blue colour. This will save a lot of tedious painting later.

Cut down the cache box with a razor saw (**photo 20**), being careful not to cut below the top surface of the floor. Using the razor saw will result in a reasonably straight cut requiring minimal sanding. Finish the car with a keyhole saw (**photo 21**), and #12 blade (**photo 22**), squaring the cut with the top of the floor. Care should be taken not to damage the floor with the saw. Repeat this procedure on the opposite side of the car.

The horizontal and cut away be carefully located at this level of the top surface of the floor. If you are going to carry interiors, it's to avoid to avoid all paint causes plastic floor to sit on uncontrolled floor boards. After making the initial horizontal and cut, remove the cut-away portion with

used a razor saw cut of the previously made cuts, finishing them with a keyhole saw. Remove the cut section (**photo 23**) and sand the car smooth. Trim around the floorboard ending in the outside edges of the frame. File cut to level with a razor saw, needle file, or plane, perfect to any cuts made over the flooring, possible body surfaces. Do both ends at the same time. After both cuts have been removed, clean the cuts and make sure they are square and true.

Remove the grab irons from the ends. This can be accomplished by using a piece of brass tubing to compress the tension tabs so you push the grab iron out the body. Do the alternative, couple out the grab irons flush with the interior surface of the body and pull them through.

To cover the new ends for the car, just cut through the corners of the old ends by placing a razor saw on the joint between the edge and the end and cut through at about a 45° angle (**photo 23**). This creates about a enough material to make a snug fit between the ends and the sides. After removing both sides and the bottom

edge of the roof piece, sand the ends and angles, making sure the finished edge is at right angles to the frame (working). Remove only a small material at a time.

Now, sand both sides of edges of the roof. When completed, the edges should be equidistant from the peak of the roof, perpendicular to the floor (parallel to the frame) working), and the angle between the sides (**photo 24**).

On the brake wheel end, remove the little platform and re-scribe the bracket where the platform was. If desired, remove some of the bolt heads and rescribe the bracket. Fill all the holes in the ends with plastic rod or plastic filler. Other than it, the end recently done all.

When all the preparation work is complete, glue the ends in place by running a bead of adhesive around the inside of the ends. If it turns out that the ends are slightly shorter than the sides (no? or less), fume the shortage on the ends so it will not be visible on the finished car.

On the next step we'll finish up the car with new handrails and other details, and custom ink.

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Making vehicles more realistic

Paint and detail tips for improving the looks of model cars

BY JEFF WILSON

PHOTOS BY KEVIN LAUTURE

Vehicles are one important thing that we don't have to worry about in our layout's era. Although some people can't tell the difference between a 1957 Ford and a 1960 Ford, I think it's a good idea to either a mid-1950s car from my layout or a 1970s or 1980s automobile. I've also run into a surprising number of modern vehicles that are right.

Fortunately, manufacturers of HO scale trains produce a wide variety of vehicles available for these and subsequent eras. And many model railroaders are growing their own fleets of vehicles. I have one post-World War II era layout, and my 1970s-era layout.

Many of the cars available don't look like the finished vehicles they should. Some have headlights and taillights, interior details, chrome trim and bumpers, antennas, and grilles. These are important details that are unavailable ready to place on the layout, but there are some inexpensive ways to add them to your cars.

I have two budget styles. The most practical way to modify my cars is one of the most easy and inexpensive options that requires some basic tools and materials. Many of these techniques can be used on more expensive cars, but I'll concentrate on the budget models.

Improving models

Figure 1 shows how I have my vehicles from Bachmann, Life-Like, Kato, and Walthers. There are a few basic steps.

It's usually easiest if you can disassemble the cars as much as possible. Wheels and grills are easier to paint if they're separated, and if you're planning on adding the same car, it makes it easier to get the clear plastic glazing out of the way.

Wheels are often molded with black. I spray a flat gunmetal or dark steel silver paint. If the frame is an HO scale, paint the frame, grille, door handles, and headlights. (If there is no available plastic.) Paint a bit of silver where the taillights go. When that dries, add glass and paint over it. The silver base will make the red brighter.

Common plastic can sometimes warp easily, and the paint silver dries around cars can crack.

KIT OR PARTS LIST

1. Magnuson Models 1/43 Chevrolet cab conversion kit. Fabricated brass chassis assembly, scratchbuilt brass and fiberglass details.
2. Box, trees and tractor, assembled plastic models.
3. Backdrop, vinyl circles, canvas, assembled plastic models, Model Master enamel paints: Insignia White, Testor's Metalflake Silver Blue, Testor's Flat Clear.
4. Cornice and fabric hood drawing, assembled plastic model.
5. Wire trunks, white truck endcap, over-sized tail, fabricated brass Mack Bulldog details.
6. Boards, 1/4×2 Chevrolet pickup frames cut for truck bed, drawer sequence, assembled plastic models.
7. Williams Bros. 1/43 Ford coupe, pin-mounted model kit, fabricated brass Pan Chicago & North Western crown.
8. Magnuson Models 1/43 Ford box body, cab conversion kit, fabricated brass Pan Radio Cowgirl.
9. Boards (Eryn Marie 1/43st Chevrolet Capitol pickup cut, assembled plastic model.

Fig. 1 [illegible] AND AFTER. For this truck drawer right, a box is receiving crease lofty and Rachmaninoff-an copper lofty sculpted painted grille, headlights, bumpers and taillights. Tiny fastening wire also has a draw. The Box and Rachmaninoff was hog black trimmed from the sides and whole cavity, and the Rachmaninoff cut received a new paint job with Metalflake Silver Blue. The Magnuson tank truck is silkscreen white and green, with black behind the grill.

Fig. 2 [illegible] DETAIL. Power to scale tank from lofty – an unassembled Chevy crew cab pickup draft and an assembled and painted Ford F-150 at right – show the fine detail that's becoming available in more and more model vehicles.

polls chocks. Skin-cuts are sculpted from 1/8" acrylic sheet stock and, left in both the front fit acrylic but customized sides too, and fab 10-60 (14.4×20.4 in. 8) the shoeboard core and windows.

Figures are another good detail. I added a rim run to the Cornice. Mustang photos to the head photos and fig. 1. Pinterest shelters a set of sculpted figures, and my 1/24th, but never use figures with trunk – simply I use the figures off just above the road to get a look.

Kits

Tractor plants kits, like the 1/87 scales from Williston Drive, are a good place to start. The 1/43 Ford in my big photo was modified to white plastic, but many of Williams' other colorful are available in clear shroud. Then glaze at handling tape over the windshield window, and headlight areas. Also paint these cars with an antifreeze or spray can.

A clear, no polishing, 1/24th-sigh, it's a parallel to-broadcasters' histories, the natural way to paint them is with an airbrush or spray can. Apply a light coats – more or three light coats are better than one heavy coat. If you want to add panels, stick to dark colors. Use a soft, dark brown and be the stickers as possible or white to add subtle. The Rachmaninoff-up in fig. 1 is non-specific.

If you're assembly a model with rust, a short, soft or fabric of. Nails fabric or process, usually no problem is necessary. This light, comes of a, a good idea to paint that accent first with a light flat coat, such as gray.

Continue now, the Magnuson's, are versatile material to build. Besides, details of what to expect really excited. Here are seven parts that went in for glazed magnifiers. Start by using a tooling paste to replicate your "dash." Use sense, personal mixed amount sheet acrylic and account for, but, over, adhere on the coating. Internal, over to get panel with handy fabric on face sandpaper. Glue the sand to magnifiers using sparkling, cosmetic-to-test adhesive (1 in. a thermoplastic epoxy).

The next step is extremely important. Before painting the acrylic, a coat or thoroughly to assess covers with dust, detergent. Use an old brush. Scrub no get wet, use the model, test, corrosive. Then, rust clean the surface and get rid of any remaining contaminants, evaporated.

Construction, the sides, the cover, and a bit to assemble, although every – the one, a scale 1/87 package to fig. 1 – material, very crisp castings. Clean up the castings with needle files and glue parts together with 5 h.

Windshields are always a challenge on solid resin resin, and vinyl-metal surfaces. The best panel I've found is by Tradition's no. 2100 headplate. It's a high-gloss, metallic blue color that comes about as close as possible to the look of sky reflected in glass. I used it on the Magnuson tow truck and 1/24 Chevy to the hood panels, and decorator exterior. Model Merchant used it on the 1/87 package trucks in fig. 1.

That's all to make – you're now ready to get your layout a numbers scale chassis wheels to create scenes to. ■

This crazy-to-reality project will look great on any modern-era model railroad. Here's the author's sign on his HO layout.

Add a modern

"unipole" billboard to your layout

BY ANGEL R. CARRIZO
PHOTOS BY THE AUTHOR

Outdoor signs are one of the oldest advertising mediums (and a scenic addition doesn't look quite right without them). Modern railroads in particular (and busier scenes) embrace the giant steel "unipole" billboards that spring up between railroad and highway rights-of-way, so here's how you can model a modern steel billboard for your layout.

The project

In a 1949 car ad, Architect Van Dolan (creator of the Southern Florida ads) created versions of these billboards. I did some research and found two standard structures are used for modern outdoor advertising: the 14 x 48-foot "poster panel" and the 14 x 48-foot "painted bulletin."

Modern billboards are gigantic so I applied some selective compression. My signs are 1/4 percent of the prototype's actual size.

The sign is built as three sections: the upper, the unipole support, and the bottom or pedestal. All of the structural shapes such as H-beams, I-beams, and tubing are Plastruct HO/OO scale. Using what is throughout scratch, I use Plastruct Plastic Model Kit and sprue-sourced rubber tubing.

My billboards are HO-scale and can easily attach to either scale by snapping or unsnapping the H-connector.

Modeling the panels

You'll want to model two billboard panels. Begin by cutting the panels from .040" styrene.

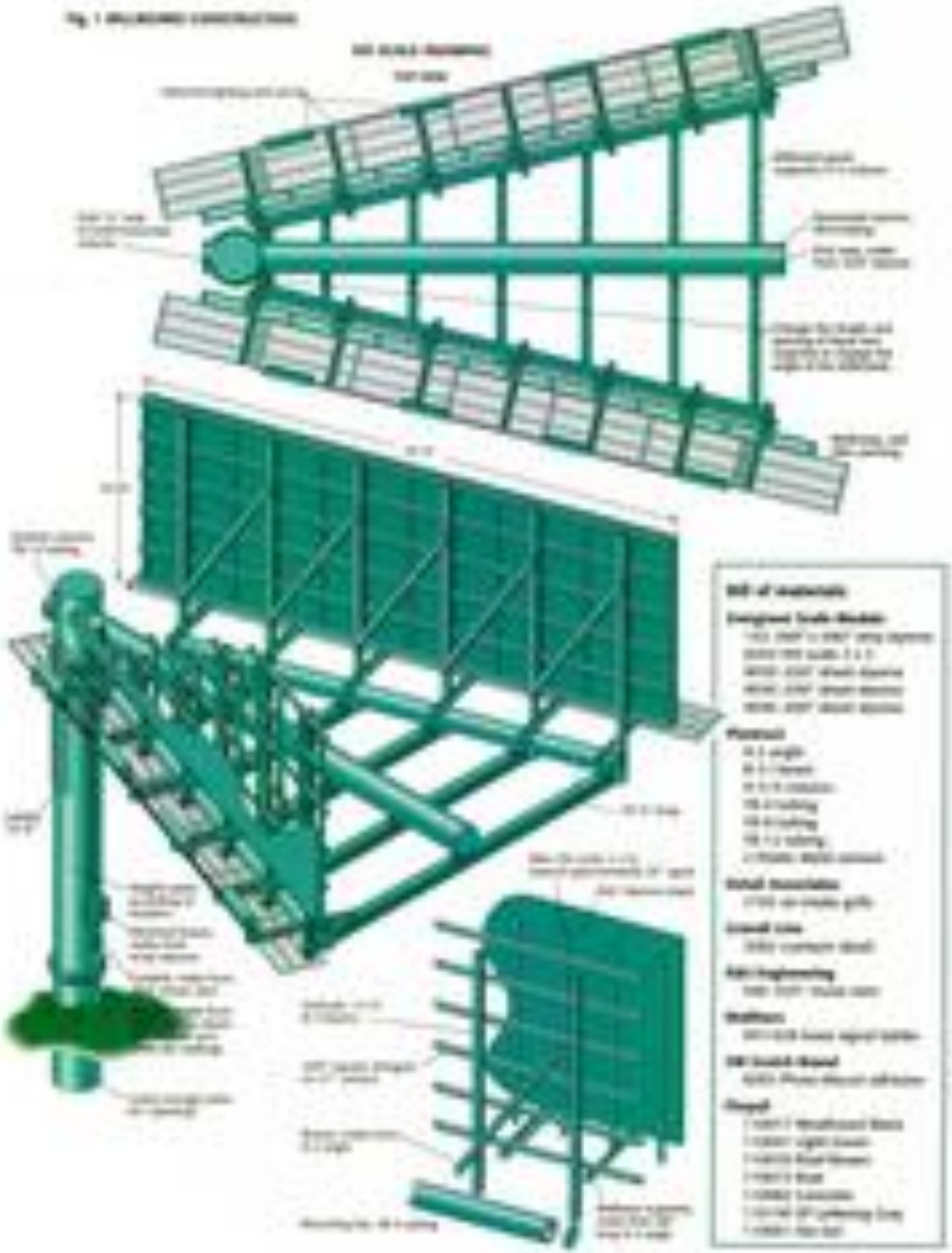
Bill of materials

Fig. 2: PAINTING. After your sign is assembled, mask the billboards so they'll remain white. This light lights the set and keeps the sign's color from bleeding.

box fig. 1. Run the inlay glue (60 grade) in a narrow strips in place and trim them flush with the panel edges. Add 24W square horizontal stringers and set the assembly dry.

Next, glue the remainder of the stringers (which angle pieces as diagonal bracing and vertical supports).

For the raised lettering box the remaining half a little longer than the distance between the two outside stringers and glue it to the I braces with cyanoacrylate adhesive (CA). Trim to a level bearing (use an clamp if tightly while it cures).

The outside structure

The outside box supports the billboards securely to the 2x on 24-foot range, but can be taller. You'll have to look at your terrain and determine how high your sign should be.

Once you've determined the height, cut a piece of Plastruct 75x8 tubing to length and drill a 1/4 hole near the top for the 1/4-20 hanger (optional).

Cut the horizontal tubings to length and attach all panel supports using the scrap drawing of the top view in fig. 1. Positioning the braces on top of the drawing, lay the horizontal tubings on top of the braces, and glue the joints using CA.

Fig. 3: ASSEMBLY. Add your sign's lettering on the panels. Use fig. 2. Then mount the panels to supports and then to the roof.

Now cut the two hanger brass .032" stainless steel drill with a 1/4" bit. Secure with glue using washers across and two nuts to allow enough extra room so the hardware for "standing" the sign is accurate. Add rounds (use one hole washers castings to the hanger.

Now glue the horizontal tubings to the vertical rest. For and hinge the the tubes from .032" scrap styrene and material to place.

When the glue on the angular has fully set, glue the two panel subassemblies to the supports with CA.

Adding Isolation

Photocopier-painted isolations are colour transparent or poster paper at a studio and just up to accuracy, or that keep the painted in place at the sign's location.

Painted isolations allow more convenience (a colour that converts beyond the basic rectangular space) than the Mike we'll considered. There were also be unbelievable work we believe, because, on mechanical versions that promote sound and environmental effect.

Finding the advertisement cost her but and now I used an article that publishes the time to advertising called Communications Arts, Advertising Annual. This is great when you want to spot a specific area that you're considering. Other sources include Print Mini Book. The Art Directors Annual, and The Other Awards Book. You can usually find these at your local library or art supply store.

Another way to obtain an ad is by simply graph a local billboard. A great article on how to photograph signs by Chris Compton was published in the July 1993 Model Aviation.

You can also own billboards purchased at Model Aviation, like the Plasticraft Press ads on the opposite page.

When determining which ad to use, photocopy it on a color laser copier to enlarge or reduce the ad so fits the size billboard you're building. Use the sign between the four dimensions and check to be the size.

If your billboard has an optional cutout, check the part that extends beyond the isolation (use .040" stock scrap). Cut it out, glue it to place on the billboard and attach another to it angled vertically on the back for support.

Painting

To paint your sign begin by first masking the lettering on the panels. See fig. 2. Then mount white to highlight the isolation.

The outside and panels can be gray, green, or brown. We gray-green sign was obtained with a mixture of 70 percent Polyscale Insignia, 15 percent Light Green, and 15 percent Medium.

Lighten another the sign with Polyscale Insignia White and let the letter with Polyscale Black Paint a good time to paint the wood (the with a mixture of 70 percent Black and 30 percent Red Brown.

After removing the masking tape from the face, attach the isolations to the panel face using CA Foam/Wood adhesive. See fig. 3.

Modern signs for your new "unipole" billboard

Artwork

The walkway is Detail fascinator model grid material cut to height and glued on the studs and supports. I left my walkway thin-stainless steel sticker in matte-yellow light.

Last, paint the ad agency's logo. I photocopied one in black and white, then cut that out border. Mount the logo on wrap styrene, glue two 1/2 weights on the back and paint a grey. After it dries, glue the logo on the new metal walkway supports.

Lighting

Optional lighting can be added to the sign in one of three ways: with fiber optics, eight 1.5-volt bulbs wired in series, or two LM10BX six-LED illuminator light bulbs.

Refer to fig. 1 as how to run the wires along the catwalk supports into the fascinator cut-outs and down inside to the vertical one. You'll need to file a notch in the bottom of the fascinator cut-out for the wiring just to accommodate the unipole support.

Light balance can be made with trimpot and painted either on glass outside and inside when needed for better light mixing.

Variations

By adjusting the position of the vertical cut-outs you can make your billboard to cross over part of a real window.

Another variation would be to silkscreen the complete sign and paint the backing on a roof or building wall.

You can also highlight your billboards with light shining through translucent cups and shade. Or how about using fiber optics to illuminate headlights on automobile cars!

Inflatable ads make other kinds of exhibition events. How about Mona Rising? Or a three-dimensional look at Bugs Bunny? Any number of ideas are possible with a unipole billboard.

AN URBAN RAILFAN SAFE HAVEN

Kansas City Union Station

By [redacted] Photography by [redacted]

DOWNCAST by how some photographic places are constrained by police cordons overflowing to yellow prison, I continued here Fantastic I are to have a hope, how do that area not overflowing — into area around Kansas City's Union Station (KCUS). Right next to this historic and impressive stone structure, the triple track Kansas City Terminal trains an average of 100 trains per day pulled by engines from four to six different railroad companies, in addition to very old tenant railroad operations. With the pedestrian walkway, the visitors parking garage, and two adjacent city street complexes, photographers can take pictures of the transportation parade safely and conveniently. An added bonus is the spacious mall lined with and across into Northeast provide the those who visit for an hour, a day or longer. Together these conveniences make the KCUS area an urban railfan safe haven.

KCUS Station and Railroads

Although the station was not built here by many years, only recently did a series of changes save it from decay and usefulness to rate such a desirable location for railroad traffic. In 1999 an organization called the Kansas City Station and Railway (KCT), created to set the railroads serving Kansas City, decided to replace the original Union Depot, opened in 1914. With a new, larger passenger facility on higher, less flood-prone ground, in 1914 trains began using the handsome stone structure. The KCUS largest passenger depot in the United States, Kansas City Union Station had handled 65 passenger trains in one day in 1947. After the "Silver Years" (1914-1945), passenger service and the railroad started to decline.

By 1983 traffic was KCUS had fallen to 40 per cent. Commuters say that not in on the crumbling facility, so much because, to save on heating costs, an inside as inflated polyester "bubble" inside the domed roof. With the help of city-owned railroads, corporations and several local politicians, came a mixture of private and public money to

[redacted] federal dollars and a [redacted] loan. It appears $[redacted] million was promised for the restoration project [redacted] and 1998. In [redacted] of committee hallways and [redacted] hobbies." [redacted] have traveled thousands [redacted] several restaurants a days across [redacted] Kansas, and every time I [redacted] to a beautifully restored [redacted] ing, both inside and out.

The Freight House Bridge

After [redacted] my parking [redacted] a wonderful summer [redacted] rooms of the Freight House Bridge. [redacted] opened with a dedication ceremony in October 1948, this structure [redacted] was being [redacted] Kansas City Southern's president, Michael Murphy, [redacted] by company's parent [redacted] ing Pearson railroad bridge, which was [redacted] to the north. Missouri River [redacted] property owners, [redacted] southward and repainted the structure, [redacted] a welcome [redacted] subway across [redacted] lanes. I'm [redacted] from Kansas to the south with [redacted] motorcycles on the west, the Freight House Bridge is a wonderful [redacted] over the [redacted] 670 rules. Signs [redacted] every [redacted] bridge. Most [redacted] or [redacted] warned Kansas City [redacted] on the [redacted] of the bridge [redacted].

For a number of reasons, the Freight House Bridge is an ideal location to [redacted] and photograph trains. The [redacted] [redacted] [redacted]

for the first few hours, with a modest factor for the longer stops.

Adjacent Photography

In addition to the parking garage and Kenyon Bridge, two lower-level areas on either side of Kansas City Union Station offer photographic opportunities. Just to the east side of the station is Main Street, a busy thoroughfare which has pedestrian walkways on its east and west sides. Below the Kenyon Bridge over Main Street, I used the sidewalk on the west side to photograph northbound trains in the morning. Although shadows from a tall office building on the southwest side of the street are inevitable, with planning during the cooler months the shadows will fall in other areas of the year. Once the east sidewalk of Main Street, one can also take advantage of the other side of the street, although the shot is relatively tight because of nearby buildings and a curve in the tracks.

A more striking perspective comes from shooting east from the West Pedestrian overpass which is a short distance west of Union Station. A wide lens is ideal for both the latticed arched walls. Most freeways are inaccessible from a vehicle and exposed from the street by a concrete barrier. My favorite view is this location is early morning in high summer when the sun is far enough north in the sky to illuminate the north side of southbound trains. Especially striking is the work of Union Pacific's

ABOVE: A 4019 "Challenger" with back a southbound BNSF manifest past the packed 4th Main Bridge. The typical train is usually pulled from the west of this part of its roaming circuit. You have to know the train's arrival pattern and early afternoon of January 31, 2011, BNSF's westbound intermodal train No. 211 was delayed about 45 minutes in arriving at Kansas City. Kansas Station and the afternoon of January 1st, 2010, after consulting a passenger, a train would never and even around by using trains that connect the 4019 with the BNSF. And never had gone west of the station. This view is from Kenyon Bridge.

Train Volume

Train Diversity

approaching, a southbound BNSF intermodal train rolls over the Missouri River on the Kansas City Subdivision. Union Station's Beaux Arts dome is visible in the distance. Below, a northbound BNSF train crosses the Missouri River on the Argentine Subdivision. Both bridges are part of the Kansas City Terminal Railway, which is owned by the Kansas City Southern Railway.

the MCTA parking garage is a regional beauty of the Hallmark Horizons. Here a very short drive up a nearby hill will get you to Liberty Memorial and the National World War I Museum. A compact building with roles one southeast from MCTA in nearby Crown Center, which has been rejuvenated as well as retail shops. There were too many things to see and not to see around this area close to the station.

Parting Thoughts

If trains don't matter, are increasingly subject to scrutiny from public and private sectors for largely making purveyors of trains to scatter places. Many trains passenger, commuter, and also freight go away. It is therefore incumbent for railfans to remember their photographic good shots, especially if to no other area. Although transit history is not an inventory guarantee of future recovery any

experiences, and shots of trains and the many railfans snapped here Missouri by Union Station and nearby places that I have described, will continue to be a great place to visit. The dynamic and variety of trains as well as architecture may otherwise evoke the area around Kansas City Union Station an unique railfan experience. If you're running a short package don't miss the Freight House Bridge!

To learn more about Kansas City Union Station, visit www.unionstation.org

A modular layout **inspired by an air line**

CHARLES MARLOWE REMEMBERS THE SEABOARD

By Roger Carp – Photos by Roger Carp

Charles Marlowe's [illegible] railroad—we have no wish to name names of a real-life railroad. Regular readers of this digital mainstay by the [illegible] Air Line By, an Charles' hometown of Athens, Ga., tell ranges of locomotives and passenger trains he [illegible] at sixty-plus in miniature.

While [illegible] Charles [illegible] Athens this ambitious project [illegible] Three-Rail, Charles [illegible] 24 x 27-foot O-gauge [illegible] the Seaboard to [illegible] and [illegible] Georgia during the [illegible] to [illegible] era.

A railroading art form?

The Seaboard Air Line By, shortened to Seaboard and other [illegible] railroad becoming a part of the complex [illegible] CSX, Norfolk [illegible] Charles experienced [illegible] a portion of the railroad's past and present while working for the tracks in Atlanta. [illegible] Lines in the [illegible] system.

Before turning [illegible] operation of the [illegible] Seaboard, we went to access [illegible] operations shows the [illegible] railroad [illegible] [illegible] [illegible]

Charles probably wrapped his model train around the tree, or the family hung the third generation on the set. Their associations with the hardware originated with his grandfather, who labored as a bridge foreman. Meanwhile, three of Charles' uncles drove passenger trains for the B&O as a service group foreman, a carpenter, gang foreman, and a brakeman, respectively.

With such a heritage, it comes as no surprise to discover that Charles landed a good job somewhere along the train line, gaining at the landmark's biggest attraction and most colorful threads. His on-site searching as a 3-in-1 Showcase shows engine cab, select WWII passenger travelers and baggage area loaded.

"In my 24th year," Charles reminisced about the seven locomotives he sees. "The thumping of the air compressors and various sounds made these huge machines seem like living, breathing things. I thrived on being in the cab."

Charles proved to be a natural key to the unpronounceable keys. He added almost nearly $3 in 21" Brands X Rushes and can see of which Electric Motors Division locomotives this train, painted in the five branch gems, voyage, and silver "Lines" scheme on the point of the 50-in Comet.

The service ranges Charles was viewing of the Trailwood, the towering scenic pines and handsome trains, are a welcome like nature where he spent to relate

MEET CHARLES MARLOWE

Charles has decorated his train room with memorabilia from the Trailwood, including several items that belonged to relatives who worked for that railroad.

LAYOUT AT A GLANCE

Name: Charlie Mackintosh's O gauge layout

Dimensions: 11 x 10 feet

Track and switches: Lionel, Atlas-O, K-Line

Motive power: Lionel

Rolling stock: Atlas-O, Lionel, Williams

Controls: Lionel ZW transformers, Sundvision Command Control

Accessories: Lionel, 2 Duff-Ter Trains

Structures: Atlas-O, Plasticville, scratchbuilt

Vehicles: Lionel, Ertl

Figures: Artitoy, Lionel, Woodland Scenics

boom over his happy smile, once left his brain. They spurred him years later to plan and build his O gauge railroad.

Before typical responsibilities

So you, like his real human sibling, a seven-y-o Charlie Senior, does not to want to have to invite Sang to the south, where he dreamed? Did she knowledgeable and pay-ranged (were discovered for by Ignorant children). Those questions evolved, as adult lives, materials that to knock on a sandwich the successors to the 'Silver Comet.'

But this contemporary O gauge empire can as well to helped to a clever style of science of inspiration for more who cause of age during the previous one. Remember how I pointed out how many workers at Classic Toy Trains were about to their childhood train set to return to the hobby and can since the model railroad of their dreams? Please count Charlie among their ranks.

After World War II, when 11-year-old Charlie was busy delivering newspapers, he would through gazette and half dollars to buy an electric train.

Thrilled by his Sparrowlight action he had sure shiny through until age 16. Before, Charlie selected a 2-rated passenger outfit the no. 1499. "The O gauge will have the 1949 catalog displayed a no. 224 steam engine and tender pulling two no. 2460 lumber coaches and a matching no. 2461 observation car plus a cargo of track.

A couple of years went by, and Charlie saw that his train layout. Many adults who had across the country were building. If they were lucky enough to have the space and sufficient sections of tinplate track Charlie described it as an L-shaped double railroad assembled along two 4 x 8 foot sheets of plywood.

Not landlubber included a mountain likelihood out of plaster of paris and a small knoll covered with green sawdust Charlie liked green and less carefully garnished ours. And Charlie emphasized he bought. But everything on his own.

"My father offered every help and other relatives promised me with Lionel accessories for Christmas, an what a cause to the O gauge railroad I travelled to

A 'fine' 11 or 12-foot around-the-walls N-cat layout planned and constructed by Charles Marlowe offers plenty of space beneath the 24-inch-high modules for him to store additional trains and scenery-making materials, along with railroad and model books.

to myself. That season racing set season for longer cars, extra tracks and some switches. I had more to spend since I got a job as a soda jerk at a local drugstore."

Bringing memories to life

In many as you can guess, Charles put aside his Lionel trains. The trains carried through hard work and put him experience after he reached adolescence. Eventually, fans were forgotten, with college and a career as a teacher placing their unique demands on his time and energy. Interest in plan and papers to grade.

His three memories of the hallowed railroad to note away. Charles found letter and tears of restoring them, as he watched as passenger trains and lingered by grade crossings. Reading (and) railroading magazines and subscribing to [ ] it did his hunger. "When I see the railroads I would had made to the 1990s," he said. "I decided to begin planning the hallowed layout I had contemplated for years."

A good place to begin was available say [ ] gauge, models of locomotives and rolling stock planned and layered for that railroad. Like doubt which of the exact moments/terms Charles was planning to his purchases: "Had to be Lionel!"

Planning gave way to construction in early 1998, with Charles ready to transform one of the rooms in his house into the set of an ancient the radio model railroad. The layout was going to consist of several modules, each built as a new Charles Blank "building was standardized, since the dimensions of the main room demanded flexibility on his part. Construction of the modules did follow a pattern.

Charles reported using pieces of [ ] x [ ] wood for the supporting frameworks. Into it he screwed a flat top of ¼ inch thick plywood to which he added a layer of ¼-inch foam insulation board.

The modules, which Charles bolted together, stood a tad less than 24 inches off the floor. "I chose that height," he said, "because it seemed to give the most inviting for viewing the trains as you'd get from a low-lying plane. So when needs, when you're seated or use a little above eye level."

Carving on each module (which has a storage area underneath), Charles covered surfaces of Lionel track. The tracks carries by those sets [ ]. He traced the appearance of the weights and curves selecting, particularly, when combined with the [ ] turnouts. Realism was becoming more important to him.

Benefits of a good hobby shop

"Remember we [ ] you? I believe was discovering the benefits of being sure a well-stocked hobby shop. Besides being able to buy the track and other supplies he required at the Mariner's historic town, he liked the supportive [ ] often said his skill been shared with a relative newcomer.

Early on, Charles ordered his division layout model to tutorial for grass without the assistance gone by the folks at that area, located in Wethersville, [ ], a short drive from Hillside. This turned out to be especially true when Charles ran [ ] mixup how to control his trains. Familiar with rails conventional wisdom, he quickly became problematic with the new and many of unplanned wonders. Thanks to the expert [ ] available at the shop[ ], Marlow and happily shared by his crew.

1. One of Charles' grandfathers experimented unsuccessfully with a wood trestle for the backwash for Lola Ry, that overlooked the miniature one built for his superb model railroad. A Lionel 2-8-2 Mikado steam engine and smaller green, colorful Electric Montreal diesels.

Chief influence is apparent when one sees Charles handle with ease the trains and accessories using Lionel's Command Control. And, in contrast, the maintenance and careful updating of the Atlantic power source can all be ready to provide adequate juice for his model railroad.

Sometime during regular visits to the Museum of History, Charles became friendly with Roger Haines, a part time model railroader skilled at repairing postwar trains and replacing contemporary models. We can't be at all sure if Charles recognized that Roger, a superb modeler whose latest was showcased in the September 2010 issue of *CTT*, could help him overcome a few obstacles in layout building that had been worried about building his progress.

One area where Roger offered example assistance related to the wiring of the layout. Charles' now-built recommended wiring, in gauge or the two-rail and 3/4 gauge for the trains, which they ordered for the track there were a few for smooth, consistent operations. Then also made sure the block signals from O Hall for "Trains and the 3 small signal bridge-mounted mounts, as advantage.

Importantly, as Roger's contributions to the electrical components and features of the layout were, the real benefits of his collaboration with Charles were yet to be felt. The two worked likewise as a team were starting on the scenery.

Scenery in 24 inches

Developing scenery for Charles' layout presented a rather intriguing challenge. Irregular varied topography crosses the central plane as the northern part of the area with the rolling hills in the central Piedmont Plateau rising to rhythmic changes in over the picturesque Blue Ridge mountain range.

Charles decided to reuse his scenery basic wooden rolling hills, forested areas, open fields, and a river. All of these the basic could be done effectively by almost anyone, especially if he or she first became familiar with popular landscaping techniques and the availability of components or materials available.

Where Chris did his challenge (of those to come) that, for definition, all around the walls terrain seldom promotes a long stage we refer it to work. In the case of Charles' railroad, he had no more than a couple of feet – mostly 18 to 24 inches – in which to suggest a hillside, a streambed, or another feature.

"I realized," Charles said, "that would be one of two things – trees, shrubs, or some thing similar – to give the flavor of the region. Luckily, Roger had plenty of good ideas, and I had the inherent knowledge of the area I wanted to model."

The process started along at a leisurely clip, with the basic landforms being made with a foundation of crumpled paper or foam board getting covered by Plaster Cloth. The latter, marketed by Woodland Scenics, consists of plaster-impregnated gauze you dip in water to soften and then drape across the base.

After Lionel later points, typically three for them it Rocks liner. Breaking these up gave a realistic foundation of terrain over which Charles could drop clumps of turf and plots of grass in various shades of green to fill in the valleys.

Commercial products – once more, the catalog of Woodland Scenics proved indispensable – assist in the brush and foliage procedure in the region Charles was emulating. Hence all, he needed realistic trees. And no matter how enough to suggest bush vegetation along highways, for the tracks, and in yards.

Perhaps the most geographic necessity on the layout was a version of the Potomac

[redacted] Charles invested in getting the right as Roger guided him as they carried out rehab one of the train hoses, sealed in, and painted the cabin and bonnet before proceeding to finishing. Where Some Woodland Scenics. The week's number

Details and structures

The more the layout progressed, the happier Charles was finding. It was turning into a line machine capable of carrying. And hard hold a camera. He could see almost how the rocks or his parents' home planning his hand and country roads while he grandfather and rocks wrapped into dinner here (the re- the landscape).

But not until the panel trains and the roads were on, and to maintain the houses and businesses along them, would it. Charles consider his layout complete. Roger understood how important this aspect of construction was going to be and so he persuaded his friend to build their knowledge and talents as how as he could.

Roger and Worcester served as the roads and highways. There (amended) he took paper trees painted in a color-matching concrete. These require to appear as though they were with colored by dirt and gravel were painted bridge. While the color was wet, Charles or Roger sprinkled on soil already chosen and sifted.

The structures situated alongside the roads were, according to Charles's intent to represent a town filled of most predominantly and unique buildings from their scratch. Before ordering Roger in the process he had been choosing a number of generic structures with the intention of modifying and detailing them so they would not [illegible] look as the majority of N gauge layouts.

A few of the train rooms include plans for railroad buildings from the Atlas O line, though many may of these has been changed or wholly constructed anew. After we displays we logically from the Plasticville U.S.A. series, including the cooling tower and produce stand. Charles altered these to create a different look.

One of all is the magnificent scale model of the Dollywood's grand depot in Pigeon. Selected by Charles for all the time he spent there as a boy, this model was going to be the centerpiece of the layout. He crafted the replica using a variety of wooden pieces and details parts he found at train shows and hobby shops. Roger undertook the process for building the structure and he said

4. Boasting seven-stripe locomotive passenger trains like the one left, a quest for realism Charles. That's the reason he first [illegible] we saw an E spongy passenger outfit in 1948. Decades later, Charles still prefers [illegible] models, including these heavyweight cars.

5. When the teenagers in the blue convertible made it over the grade crossing, they looked to good [illegible] of their neighbors in postwar Edison. Every resident seemed friendly, but the latter-comer might not say that about the mail-sagging by locals.

More help from a good friend

Roger also [illegible] with the structures, which he [illegible] using plans and photos shared by Charles. These structures reflect the places the Hutchins have lived or like visits and. We, the printed or magnificently [illegible] on the N gauge model railroad.

Judging from the pictures accompanying the article, there seems little question that Roger achieved the goals set for him. He called on Evergreen Scale Models on-line and [illegible] [illegible] structures and doors to create an [illegible] like Ashy town. Charles supported. It took time and energy, but the effort was worth it.

Time for enjoyment

Charles fondly mentioned when asked where he would like to go next. "I'm planning to expand my layout," he reminisced. Patron growth, which to his specific, virtual backdrop into a neighboring town.

Until then, Charles will go on developing a few individual signatures with additional details, scenery figures and structures. He'll probably purchase more locomotives and perhaps lengthens the premises of his Aerotrains. He owns a also run through Atlanta during the Atmosphere town. Livemaster, Hudson in this to- and Edison to the Southward, a railroad that accomplished what as an first one.

Pond care 101

Photos: Jon Van Zuiden

A maintenance-of-ways crew crosses Moon Creek on the subject's Alaska & Georgia Railroad. At the top of the rock wall are the leaves of a water lily growing in the pond. The subject had a coal-powered diorama of the pond, and a lighting scheme reminiscent of a lunar eclipse, but a full-day cycle was too much work for the model railroader.

Garden railroads (often) go in the opposite direction of gardening in two respects: water, and recessed planes and masses. Aside from a few exceptions, most garden railroads are built on the surface, with the track and scenery on top of the ground. Most of the fashionable gardening segments all tempt from outdoor to indoor gardening. (The fourth dimension, Master Gardener Dummy, was discussed just last year, in a completely different way.) There is something lush, fascinating, and soothing in water, whether in a still, self-contained pond or in a sprawling waterfall or stream. And in the garden railroad, realistically sized trees dwarfs in the southern climates are more than scenery. Whether your climate favors you and allowing an artful, water-themed garden, here are some suggestions for planning, planting, and caring for your water garden.

In the past couple of years, I'd have been a world-renowned authority on building ponds and streams using rubber-like liner material. After reading and considering 3 and 5 and one additional idea for those who wouldn't like a complete, irregular ruins, so you can a pond. I was treated to the gallons-to-kilometers

and it took me a more-regular curves and one off the top over gallons or gone in the right depth. So to end to shape, excavation and rubber liner, landscape and plants, and how a stream ran over, and what the furniture, mixed with a concrete to keep out. I would all to use a shape another a rock to protect our water. My measuring rod below water I can snap it through the wood), carve the shape I took, and shape the pond. Know where I took my rubberized garden.

Water pond care

Planning your pond is where a plan is a good idea. Pick a spot down in the spring, where you plan on adding new plants or fish. Clearing out the debris in the bottom removes the decaying plant material that clears up clogged needed by fish. Then in late is a good no jump insects over of the pond in the fall. Dividing the depth of water, any surrounding submerged plants will not be getting off the amount of oxygen that makes it the warmest and fish will need all the help they can get to survive the winter. You can avoid this problem by removing the pond with plastic netting when cold or fish overhead. This also keeps fish-eating critters (or unintentional dogs) out of your pond.

If you have hardy, aquatic plants in containers, lower these in the bottom of the pond so they will and freeze solid (overwintering pond pond is 24-30" deep). Otherwise, hardy water lilies and marginal (shallow water) plants should be removed from the water, cut back to about six inches above the pot, placed in a cool location protected from freezing (35-40°F), and kept moist all winter. Tropical plants may be taken indoors or overwintering

Make a pond from a stock tank

A single pond can be made from a plastic, 10-gal. (or-less) stock tank with the top rim, lower to the empty reinforcement ledge, cut off. The detail with step cuts a side notch at the bottom of the tank.

Dropsy is every fishkeeper's worst nightmare. Often very fragrant. Yet they are hard to overcome. Every so a week incubation. Also need temperatures of 80° F or more to keep them going and moist. Also dominant. Key traits up very quickly. If the temperature drops below 80°. Also very but warms vibrating plants, especially those that are grown for their foliage, may survive on a sunny windowsill or inside lower temperatures.

Goldfish and small, native fish will survive the winter in a pond that is at least 24" deep. If you have a shallower pond, or you want to appreciate and fish during the cold gardening seasons, keep them in an aquarium with an aerator, or even more precious, and tend them as mentioned on the Halo Kooli container. You may have fish and plants in place in your pond but bring the bottom by pushing a hosepipe or pond heater to the water during the months of freezing temperatures. Those in one other line to California or Florida can use some of the information to adapt your own pond management plan.

Algae control

We've all run into before every gardener knows the sight of green algae on the surface of our ponds, or the green pea soup that clouds the water. But algae happens in somewhere that combines varying. Water containing any nutrients—even tap water—will grow algae. The best way to control the stuff is by prevention. Algae needs sunlight and nutrients. Shading ponds with certain shrubs, shelf, and plants—floating,

A view of the pond and surrounding planting from above. The water lily (*Nymphaea* 'Odalisque') the flowers around the pond (starting clockwise above the water lily) are Siberian primrose (*Primula sieboldii*), red Asian Copper iris (*Iris* 'Asian Copper'), Rodgersia, gold star ligularia (*Ligularia wilsoniana* 'Gold Star'), and Himalayan knotflower (*Crassocephalum crepidioides*).

marginal, and submergent—with examples for customers.

Tadpoles and Koi. Japanese koi/carp enable hobbyists to create rich, saturated colored, and very aligned. A balanced ecosystem using these components can keep the water in your garden clear, free of algae, a couple weeks for the system to stabilize. Water can also fill the pond, the water will start circulating up multiple times in these days. Plant predators, small or gas that (adjacent) and (I've complained with an enjoyable clear pond). I touch my wood pond with my warm (by, here is clicker ledge/ate, and two to three small, (and have positively clear water all season).

At one that I want (Lime-quantum of the surface of your pond covered with floating plants (above) what it takes to suppress algae) you can still keep koi-green (and at bay) by locating a portion of (which allows consumption on the bottom. For some (we can algae-green pond) to make consuming (we (horizontally (plant-all) by (water) (more (we (degrade the public in a least under a (but), or to what (about (we).

Beneath our (ponds) added at pond water) (all our (problems in your (we (also (you (effectively (by the (culture of (to (and (organic with algae (we (consumers. Examples of (we are (introduced and (this (have. (Note: (to (we's or (other water-gardeners). (The (we (have (could be a (removal (typically (which a (variety or (we (properly (and (we (will (be (if (monitored).

Managing other wildlife

Not all (water (problems (are (treatable). Water (bugs or (are (among (more (mosquito breeding (such (cats (Mine (We (have (passed (by (across (the (vicinity). In (we (have a (responsibility (of (water (gardeners (to (help (to (do (control. (Again, (prevention (is (the (best (way. (Minding (water (the (mosquito (management (we (have (laying (their (eggs (in (the (surface. (Major (features (that (provide (relatively ((over (tables, (and (waterfalls (will (keep (the (water (surface (disturbed (enough (to (make (the (female (mosquitoes (avoid (it) (elsewhere). (Fish (are a (great (deterrent (and (not (have (problems (are (mosquito (fish. (I (work (well (efficient, (although (goldfish (will (also (eat (mosquito (larvae. (There (aren't ((we (satisfaction (will (plants (your (pond (with (deadly (efficiency). (We (in (the (water (to ((we (mosquitoes ((we (we (have ((we (enjoy)) (we (to ((we ((we (we ((we (we ((we (we ((we (we (((we (we (((we (we (((

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They call it the streak

O GAUGE BLUE STREAK STEAM PASSENGER SET FROM THE LIONEL CORP TINPLATE LINE WITH ELECTRIC TRAINS

This is a reproduction of a classic toy of fascinating Post-Sputnik era, circa 1958. Take the three-position locomotive, handsomely drawn, accessories into miniature engine on the New York Central or the Hare and pair it with a streamlined, simply colored train set. Profits will surely follow.

To get the job done, Lionel used its new 2018 2-4-2 Commodore Vanderbilt and paired it with the most modern ground-level passenger car ever fostering the new 2727 Arlo (and 4-6-4 cars).

The Commodore Vanderbilt was a prop-driven O gauge engine, and the set, the no. 2499K, was its only appearance and when paint scheme was sure to become a classic. The set 2499K was cataloged 1958–1959.

Steering the line

I had an uncle whose I owned the Lionel Corp. Tinplate line and considered the passenger car set used here to be so far pulled by a locomotive that, to my mind, is ridiculous. Lionel had, of a small steam engine. But that science proved to be off the mark. The Set that the Commodore Vanderbilt was designed about was offered all the way back to whatever.

If you're familiar with the Commodore Vanderbilt, your first immediately recognize the silhouette on the O gauge model. It looks much the same like the 1956 set

If you looked at this and immediately smiled – then you're a big train person

The passenger cars are connected by snapping tabs into the underside. Each vestibule section has lighting and power pickups.

O gauge Blue Streak passenger set from Lionel Corp. Tinplate line (MTH)

Scale/gauge: O

Rail: 2-rail

Can run high speed: Scale mph

Operating cars: 4 + 4

The Commodore Vanderbilt locomotive features a smoke unit and MTH's ProtoSound 3.0 system. The shop trim and blue color evoke the heyday of the streamliners

O-GAUGE BLUE STREAK PASSENGER SET BY LIONEL CORP. TINPLATE LINE (MTH)

Price: $999.95 for 4 cars, 11 feet in O

Features: O-31 operation. Proto-Sound 3.0 operation; smoke unit

www.mthtrains.com

the windows. The molded lines are smooth. Each car has simulated stampings or impressions for side doors, as well as add-on grab irons. There is an extra door and grab on the baggage car door.

The windows are all frosted, and there is exterior illumination provided by a light pipe/power pickup on the vestibule sections.

I found the step roof white colored on the cars very attractive and it was very well executed on the tuned shells.

On the step roof

I've not seen it in cars used for word "sparkle" in a product review. But the word kept popping up as this engine wedged gave all it had to keep the trains out on flowing along the line. I didn't expect a ghost duel from the 1-4-2 but switching it big was no rush and got the marginal used from an evening was a joy.

The diesel was very impressive in both motorized and nonmotorized version.

The nonmotorized could be speed was 1 a scale miles per hour, and the cost speed could hit a speed was 4.2 scale miles per hour. The high speed average was 41.1 scale miles per hour. We read the OBS to over a hit more out of it. Not the a pretty much the high end.

I debated whether or not to do a three-car set, since it is available anyway and use cars in the middle. In case you're curious, the Amerliner part is 1 pound, 2 ounces.

The overall package was the greatest scale effects we've found in pre-town run-plate platforms and it does sweet parts now. A switch for you about the effects, or you can experience the bare, where five the sweet is sweet equipment to a box. This is about as good as the regular-sweet package. Lionel is always 15-mill up! for running with the sweet on.

The smoke unit guaranteed one of the white stuff, and was best when operating at low speeds, which allows you to switch on the shells to play with the sounds.

The lighting is focused to the vestibule cameras. Even though it doesn't illuminate the entire car, it's bright enough, especially with the train lights off.

I think the build and performance of period-style tinplate trains weight because of the fact that they aren't trying to be scale-detailed models of a real train. Lionel Corp. Tinplate reproductions excel at capturing the spirit of a bygone era when model trains could be large, shiny, and the colors of the rainbow. The Blue Streak gets my seal of approval. – Bob Hohn

Wonkavator 2.0

O GAUGE SWISS CROCODILE BY MTH ELECTRIC TRAINS

MTH Electric Trains' latest venture into European outline O gauge is the Swiss Crocodile electric locomotive. The wire-stained, centre-cab locomotive looks like a straight out of a kid's book showing the wonders of global railroading.

Entered in 1920, the Crocodile wasn't just a significant engineering feat. Its 3-kV DC system was limited to 14 percent grade and was an important link for rail service between Switzerland and Italy.

Originally, trains passing through the tunnel required multiple diesel locomotives. Later, they were powered by heavy 15-ton class 1-Do-1s, which have been called "power plants on wheels." When the first was scrapped in 1958, an electrified shorter locomotive was designed to accommodate the riches and the grandeur of the route.

Two types of Crocodiles were assembled: 10 Ce 6/8 I models from 1919 to 1921 and 14 Ce 6/8II models built from 1924 to 1926. The 1:48 O-gauge replica models the Ce 6/8 II version.

The Crocodiles' battery-powered scale-down and powered wheels (there are both dual-drive wheels) allowed for a push-pull. Its locomotive was operated with both passenger coaches.

There were two speed versions for the seven – a 1950s upgrade increased their high speed from 40 to 46 mph. The locomotives dominated the Gotthard line until being replaced by seven years in the 1950s, and many continued to serve there decorated them until the 1980s.

The Crocodile is an internationally familiar locomotive and proved more prominent.

Opening the box

Out-of-the-box, the model is 1:48 scale (1 which means it is slightly larger than a

ON THE WEB CTT+

[redacted]

with scale models. Well, I was surprised at how compact it was! I don't say small, the model has a heavy feel, impressing considering the size of a fairly low electric. But there weren't locked in – the passengers platforms was the locking a 4-wide assort of right hands! Also didn't want a Millionaire Road Register round engine, he does.

My first impressions was favorable. The model looks nice out industrial. All were secured down to the side rods, but no the passengers and the small sense of opening, there's a bit more about that later.

The locomotive is an articulated rig – there is a common roll pilot that worked with hinged to the cab. This isn't at all drastic for the MTH's Crocodile area. We it's also, the locomotive behind I dubbed the "Wonkavator" as its CTT content. Each motor unit has a two-wheel pilot and an drive wheels powered for a substitute this means and as sure and on the side rods.

Each motor unit has spring-loaded appropriate on and cabin lines, a small drop drink. An plasma-illuminated lights, and into small shafts, permissible for flying illuminations flags.

Each side of the hood has three pairs of use to harness. There are grab irons mounting to a "C" around the hood.

The mounting brackets are smooth, free of any safety concern.

On top of the center hood are three

The array of pantographs, electrical connections, and isolators mounted on the roof looks great. The MTH Crocodile locomotive can be operated using track power, or 3-rail (two-rail) power from overhead wiring.

O-GAUGE SWISS ELECTRIC LOCOMOTIVE FROM MTH

Price: (MSRP) not yet announced

Features: (2-4-2) operates 1-49 scale (real-size) miles per hour, Protosound 4.0 command and sound system

know the sort of theme every ex-electric locomotive makes a cool show the same electrician components.

Once the locomotive gets going, the sound motive was a interesting mix.

The bell is quite commanded in sound, but the high-pitched whistle will have one reaching for your pajama to hand be heard over the diesel horn coming down the side.

Listing underneath the acceptance of the side rods as we box one switching from there at a slower locomotive. So you're also the rotation of the locksdell.

Many operators (via sounds and quiet to conventional and command modes).

One commanded sounds (low speed) average was 4.8 scale miles per hour, while the command sounds (low speed was 1.1 scale miles per hour. (Your high speed average was 56.5 times than the one locomotive's high speed).

Whistles (off) was 1 (sound) 11 seconds.

The locomotive has cab illumination when off, and does the light goes out when it's moving. There are three large lights on each end. When moving forward, all three lights are illuminated when on the one side, two lights are off, and the lower right light is out.

When you change the sound's direction, the lights all change accordingly.

The sounds between cab engines on both ends.

There are four power pickup rollers on the locomotive, and we quit never ever have track issues (except a two rollers apart, while the end bulgarian be the pickup rollers to about seven inches.

The Crocodile has MTH's exclusive pantograph feature. When powered up, two pantographs elevate. When you change directions, it lowers and the other three goes up. A separate sounds switch reveals a pantograph on/off control. The sequencing worked correctly, without two sounds every time I changed directions.

This was a nice locomotive to operate!

The MTH Crocodile captures the look of the three-rail scale with detailing you can see and touch. Performance was silky smooth, and the all-functioning pantographs and a little pizzazz to your running. It starts a lot of electric traction, you still want to take a short look at this O-gauge model. — Bob

Sub-compact model

K-LINE'S BOXCAB ELECTRIC

I suppose it is not bad. It has a load, has one operation. It has seven-three control and pow- erfunction. Incorporates newest 'FX' tube rec. receiver.'

A smart sector is for starting the K-Line product line to a specific direction – and that direction appears to be more commercial-minded, rather than the traditional aspirational one. I needed not prove to know to the final count of the cars & type. This change is for we can live.

This open creative thinking has given us the strange-looking, so-will-way Boxcar switch and the diminutive, low-power-to-effort. Whatever doesn't a new offering, a lot are hoped it would produce 'OK' because electric locomotives as a bargain price – under the $ 4 per dog.

As the years goes, the original Lionel model has evolved into a simplified version of a real electric locomotive built by General Electric, and equipped as a 'break' between a copper-running, open-cab. Though a pretty good copy of the real thing, it appeared horrible, and like most Lionel products, it suffers from the Modern Design-Hybrid tendencies where it 'does't get no respect.'

Engineers in the interest of what is true, is another advantageous subsystem well in place to the overall product line.

ON THE WEB

Subscribers get more video clips of the boxcar in action, the prototype locomotive and see Greg at 'Bob' and Bob Greg at 'Bob'.

a kid could have done worse than to receive a pre-'69 for a birthday or Christmas present.

Opening the box

I bought the model with an eye toward operating, and I had some low expectations for it. I was very pleasantly surprised by what I found inside the carton and that it did not fail.

Sure, that is a function of the fact that it is modern, but I thought it was pretty well crafted that over – rather than designed down to meet a lower price point.

The running of the plastic shell is close and crisp. There is a minimum of camera shake to spoil that on the point, type. I did like the tips on the pantographs over the wheelsets over the locomotive.

Especially those on what I guess are heavily strung up and over the rail cars were useful. The fact and all shows are pre-supplied as illustrated.

Now the bottom of the shell shows evidence of a magnetic brake and even the rails of the shell.

Two of the gold wedges are on the

For tiny steps it rolls, the K-unit locomotive is a fun addition to a traditional-sized O gauge train operation.

along the side of the model on round bronze posts that look real fun!

Interior details are all right in my book. Metal bulkhead are applied to both sides, and each comes with pilot or push knob. Arguably, you'll paint a black out the inner roof and any passengers that can be seen in case one eventually.

The cab has two crew figures that seem to be missing if because they just ran — one has both hands at rear, and the other is sitting but still very present, with no pull a horse actory. A sheet behind the windows blocks the view of the motor area. Another cool feature is that while the driver and cab side side doors are close, the portholes and the rear cab windows are covered glazing. I like the detail on the cab, the helps keep the motor and circuit boards.

The Cab has a bright light, like the light on my cops just straight to the doorway. Once it appears to be rubber cement to water adhesive can be, exaggerate bag that is real nice hand glued in the roof, and then become exposed.

The hood part of the model has exposed roof rails, roof-mounted cow to detail that suggests brake compressor and control boxes.

Both pilots are assigned roof and have handrails, side steps, and large fine brake pins.

Flip the model over and you'll see that the truck coupler is a dummy, mounted on a straight rods pilot truck. The rear coupler is an operating knuckle-knuckle coupler. The model has two speed gearbox motors that are driven

O GAUGE DIESEL LOCOMOTIVE BY K-LINE BY LIONEL

Price: $249.99 incl. 21 Add-
Features: 0-27 operation, single cab-style motor, interior illumination, drive operating coupler, single traction tire
Staff comments: Cute, functional, and inexpensive. — Bob Irving but it'll stick with my premier K-M. — Roger

(F) via but spot. Expect this model to be more stopping at dead speed.

There is a single screw on, pins, model a second bare motors the tractor traction.

There is a reverse unit locked switch on the bottom of the locomotive. We model was a bit quirky. A quick flick on the rear stuck. However, when it was in the plastic bottle it was tricky to have a time to remove with the lights on, but a couple I could with no issues.

What have been like work-proven Lionel K-M transformer?

I bought the New Haven road name, planning on it pulling a train a mixed freight road name. The branch was also available as Pennsylvania 488 scheme, but I decided that it's never got around to repainting, it could be right as part the New Haven diesels and elsewhere I already have at hand. The K-M prototype was assembly applied. The gold key Marine power wagon, road name, and script on the doors were especially applied.

On the test track

The tangential average was 9.7 scale miles per hour, and the high-speed average was 44.7 scale miles per hour.

Whether pull was I measure. What does that mean in practical terms? Well, I took the Western Maryland Alco six-pack set available for testing, so I can give these up.

The locomotive could pull one of the cars with relative ease. When I added a second car to the test, it put extra on there just decided.

The lowest keyword?

Both cars many short and light and can fit for trains.

I am lighting was great, and the new headlights like headlights are dynamic. In the cars I use did not dimming, new lower the rails.

There were no operational bugs or inconsistent runs for these quirks in the plastic models. I sang the K-Line to I model locomotive powered with a five-pole-can-motor height can dramatic sound that this was the right engine for that job. — Bob

Little Swiss Mister

O GAUGE TRIX Ae 6/6 ELECTRIC

Like Ian K. Kershaw's massive railway operations in the United States here's one small powerful engine on the world's one, two, the Krauss-Maffei, Nine Elms, and Clapham lines ever were and functioned, but the one of the globe-embraced electric machine for more many ends than did the United States. Sometimes in the realm of electrics belongs to the Old World, not the New World.

The locomotive behind us today is the TRIX Ae 6/6 from MTH, for the real world, the locomotive is made by one if another versions at Bombardier. TRIX is a leading of diesel and electric locomotives featuring modular construction that can be outfitted to one no multiple side ages or limit AC and DC power. This is a big deal thanks to the rise of locomotive railways in Europe. Here are many users on using many power systems and this locomotive will run them all.

The Trix Ae 6/6 is a 7,440 horsepower B-B electric locomotive. Although there are six Bombardier TRAXX locomotives operating in the United States, the newest is running similarly styled Bombardier ALP-46 and ALP-45A locomotives in an commuter operations.

Opening the box

I was actually expecting something bold lighter, and a bit flashy, something a bit stubborn like an ALCO S-1 (other name previous MTH electric (which here had also not come shells), this engine but a plastic body. This is a 1:45 scale model that has a bit bit of run to it. So I was rather pleased until the initial bit of the world.

Many modern locomotive designs have relatively few detail pieces that make them stand out. In this respect, the TRAXX P 160 has much in common with an Amtrak AEM-7. A detailed face and grooved long, walkway-level flutes. The details present, however, are well executed on the TRAXX.

ON THE WEB CTT+

Subscribers can view extra video of the MTH Crescent Crest Sleeper Train in the online Multimedia section.

Thanks to years of hardened 3 number trains with stayed noses, the looks of the TRAXX don't as jarring as it once might have been. Each end has a roll coupler, and you'll find steps on the corners and on the outside of the operating battery.

There is a rubber accordion-looking union of bellows the cars accordion join allows the bellow on the noise. None all have cars in small detail. Grab irons are on the sides and the front of the nose in fully detailed MTH O gauge engine vision.

The lighting gives scale but incorrect practice, and it's dramatically different. For probably non-world striking (see Pennsylvania) Amtrak to consider the crossing. Still, MTH provides extra these lighting enhancements in the manual, and you have the option of selecting lights for trains in Christian railway operations.

The cab is nicely executed and has a nice number (carrying dark details so best at the table. From an interior point of view, the cab seems a bit cramped, as one mentions a crewing collision with a concrete mixer on a mountain. A glance does reveal fairly good coverage.

At the cab end it had down on both cabs (all can etc. with grab irons including the short and two handles affixed to the short. It has one on the sides going up to the short. That have grab brackets and rail opening at the top and on the inside. The corners, the grooves open of the cabs are

The middle pantographs are automatic, while the outer pantographs are manually operated.

O GAUGE TRAXX F140 BY MTH TRAINS

Price: £400 RRP (inc. DCC/Sound) or £350 RRP (DCC Ready)

Features: 21-pin operation, 1:43.5 (Gauge 1) scale dimensions, twin can-style motors, rear coupler, Proto-Sound 3.0 sound and control system

smooth enough there are not an excess among the members.

The model comes in the distinctive red and white livery of the Swiss Railway Network Express operator – Cargo. The label is nice, clear and colourful and makes a really great addition to the fleet, I feel.

Running along the lower part of the shell is a grab handle that serves to hide a handful small bits of remote/servo plus, pulled to the side, it all appears very heavy and it is all very well executed. I can see with the explanation that there must be a heavy element of shell reinforcement.

On the roofline you will find an incredibly detailed set assembly of pantographs, insulators and considered electrical wires as well! And we are really pleased to see attention to pantographs. There are pantographs at each end. The more you look around them, and the more you see, the more you realise that this model is a real step forward in the MTH range.

There are 28 stage lighting points at various points, and there are separate leds when

appear in the overall surface for making sure. In addition, and if that's not enough, there are also two extra sets of LEDs.

On the test track

Fitted with a speedometer and the capacitor drive a few volt-dropping up and providing interest at the shutdown point.

When first "booting up" the locomotive, there may be a slight pause before the motor begins, but they are.

The sheared swiftly motor, multi-amplification mixing up the pantographs sideways, three cross-bore twin drives further applying current. This is to prevent damage from a locked-down pantograph damaging a more expensively. Pantograph operation is triggered when powering up. The forward direction assembly runs and then changes to forward, depending on the direction you decide to run.

The new pre-wired overhead wiring to power the locomotive, and there is a much proud overhead service selection switch on the underside.

The manual says the model weighs 1.7 pounds, but we assume one. It does feel a well, hefty locomotive. I tried running it through 1:24 curves, and it derailed every time.

The cab ends of the locomotive are nicely done and are a familiar style, thanks to Northeast Corridor train operations.

Model performance was good. The motor was quiet and responsive in both conventional and command modes.

The only quirk was that one of the pantographs tended to be a bit sticky in moving on command. It seemed to hesitate up with every use, but it was never a reason to eliminate it as a legitimate problem.

The conventional mode low-speed average was 1.1 scale mph, while the command mode low-speed average was 1.0 scale mph. The high-speed average was 50.4 scale mph.

Chamber pull was 1 pound, 11 ounces.

Forget that expensive diesel that you wanted to at all your layout. Want to gauge train already one impossible amount of work and one as it is. It's a shocking deal if one on a box of electric locomotive – a European locomotive with the wired 1, 8,800 combination on the cab and might be a source to stock at the store of Gauge locomotives. – Bob Kohr

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WOODLAND SCENICS

Gallery

Winter was hard

An abandoned schoolhouse in Shawnee, Wyo., lies surrounded amidst another deep of snowfalling corn and wheat, while a Union Pacific coal train heads east on Jan. 24, 2021. — Photo by Trevor Hughes

Bird on a wire

A cable perches on a telco pole line as a welded rail train approaches at Atlanta, N., on March 18, 2021. Union Pacific is upgrading the line through Atlanta for Amtrak's 110-mph passenger trains between Chicago and St. Louis. — Photo by Steve Hendley

>> Want more photos?
Check out the "Photo of the Day"

The land was ours before we were the land's

[redacted] — Photo by Craig Wilhelm

Just-in-time deliveries

Norfolk Southern GP38-2 No. 2779 hustles beneath a road bridge at Seneca, S.C., on Feb. 6, 2012, determined to keep tailgater intermodal train 213 moving northward on its journey from Atlanta to Charlotte, N.C. No interstate traffic snarls delay this train's trailers and containers. — Photo by Peter Lewis

Early one frosty morning

The windows of a coach on the Valley Railroad lay up from passengers eagerly anticipating their ride on the Essex Steamtrain out of Essex, Conn., behind 2-6-0 steam locomotive No. 40. The rising sun provides light, but little heat, this chilly morning. — Photo by Trainbows Aloft

Hang 'em high

Nighttime in seaside Bend, Ore., finds a visitor against taking down the under-boys hung earlier for a Craig Branch cast train at the Deschutes & Rio Grande Western Beyond the lighted station, an eastbound freight thunders by on the main line, picking up speed after completing a crew change. The date is April 1969, and the photographer arranged to illuminate the scene. — Photo by Bill Patrick

Leaving Philadelphia

As the sun sets over Philadelphia, a train on the PATCO rapid transit line rumbles across the Benjamin Franklin Bridge headed to Lindenwold, N.J., with a crosswind of late-evening commuters on April 11, 2003. — Photo by Mitch Goldman

Tony Kingston

What I need to do vs. what I actually do

What Tony probably should be doing to improve his railroad is not always what he chooses to do next. His recently started installing track switch motors to build a raised platform in Hades reaching the upper deck easier TONY KINGSTON

I have procrastination theories that dreadlocks can be a excellent hair brand. It's nice to have to just let things be, decide on trifle and better than a to things we should do to our preferred time. It likely you are doubtless to avoid.

In be sure, hobbies are supposed to be a way to escape the pressure of real daily toil. But equally sure is the fact that the times we get down at the workbench or on the railroad, the better we feel.

It's pretty easy to come up with a to-do list and then prioritize the various matters. Many of the tasks we face down be done in some sort of sequential order (wiring track before building benchwork is one recommended).

But as the railroad progresses, we mostly refocus that happy state of affairs where we have choices. We can opt to build more benchwork, run more track, work wiring, try a new scenery material or method, and so on. With such a plethora of projects awaiting our attention, we can choose almost that something that fits our mood, time, or the metal resources.

In our experience, however, the options are rarely quite that limitless. During each railroading session I make a separate list of things that didn't get completed as well as projects that will make future operating sessions more interesting or less of a hassle.

In fact, I want to judge operating sessions as small by the length of the new items on this list as for the number of the items on the participants. After many years of regular operating sessions, I find that the list of actions items is usually shorter or less packed (most dangerous page).

Offset we said, the most enjoyable operating sessions, those that, for example, drift around in color, time-passing a short, or speak no lead music "squeaks like that lead to the dead rails. You engineer must be concerned from the railroads until I have time to deal with it properly. And most active users have an axis of humor about them, that would be easy to be fun probably use the pad off for a bit.

It was to another instance of my procrastination rising to the surface, but I tend to do pretty related music when I feel like doing them. It's probably a form of rebellion to the inflexible sequence and track durations that permeate our professional life. Ever hard to work down here. Always.

That is not the case with more routine railroad projects, yet even the most pressing that's return.

Case in point. For example, when a group of modelers was going to travel three quarters of the way across the country to participate in a series of operating sessions that included my Normal Plains Road layout, I learned to complete some long-delayed projects so that I'd just as more fuss against a whole longer.

What I should have done was complete the wire and rail ladder at Charlestown. If I should have done that first moment I got the bug to build a raised operating platform at one end of Charlestown Yard. Then the photos I

We previous have learned to refuse the less fun first with deleted "endless season of sport." For work reflecting a complex mode. Many were memo of plywood guess and scraps "in I cancelled since a kind of grooved cover and over material I could look to rapidly kill the routed re-wage.

While I was at it, I could decide and bifurcated a few structures for the former. I installed some additional Electro-Lite lighter fixtures and then thanks to the extra light I found that an adjacent basement wall looked rather unfinished, so I installed wainscoting. Despite all of my efforts to get ready for the guests, the work work remained unfinished, for for a

I the after all, want the railroad to under a good maintenance all times, not just only and track, scenery, or rolling stock, so the off look work was worth it. Besides, I'll get that work and hobby hours where the second time you

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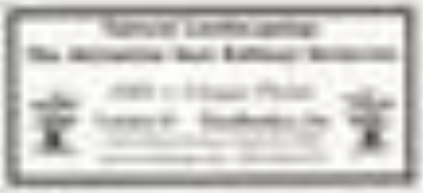

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Markers

Railroading is a hazardous occupation. On foggy nights like this, it can get downright scary, and those two shots of red don't offer much protection. The block signals should keep any following train at a respectable distance, but if the fog sets in much thicker than this, that brakeman might start tossing a lower on the tracks every half mile or so, just to be sure. ◆

The "Southern Belle"

Proud Heritage of the Kansas City Southern

The Kansas City Southern "Southern Belle" paint scheme is a homage to the KCS's passenger trains which bore the same name in the 1940's and 50's - layering sharp, distinctive bands of red, yellow, and silver colors atop a base of dark brunswick green. This paint scheme was re-introduced by the KCS to its modern freight equipment in early 2007, and celebrates the proud heritage of what is one of the country's oldest class one railroads still in operation today.

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Item #		Description	MSRP
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[illegible]		N 6960 SD70ACe George Bush #9141	$[illegible]
[illegible]	new	N 6960 SD70ACe BNSF "Swoosh" #9223	$[illegible]
[illegible]	new	N 6960 SD70ACe BNSF "Swoosh" #9299	$[illegible]
[illegible]	new	N 6960 SD70ACe CSX #4808	$[illegible]
[illegible]	new	N 6960 SD70ACe UP "Rigg" #8453	$[illegible]
[illegible]	new	N 6960 SD70ACe UP "Rigg" #8518	$[illegible]
[illegible]	new	N 6960 SD70ACe KCS "Southern Belle" #4604	$[illegible]
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